

**Hunger, Science, and Politics:
FAO, WHO, and Unicef Nutrition Policies, 1945-1978**

by

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Abstract

Out of the chaos of W.W.II emerged three United Nations agencies -- FAO, WHO, and Unicef -- endowed with the joint responsibility to help conquer hunger and malnutrition. Seminal nutritional research before the war along with idealistic policy makers and nutritionists afterwards set the stage for the first international initiatives to address nutritional issues in developing countries. This dissertation relies mainly on an array of primary sources and oral histories to elucidate the evolving position of nutrition in FAO, WHO, and Unicef.

Nutritionists at the UN agencies, research institutes, the UN agency-supported Protein Advisory Group, and expert committees contributed substantially to the shape and focus of international nutrition policies. Alongside developments in nutritional science, administrators at FAO, WHO, and Unicef implemented complementary policy changes. During the early-1950s, nutritionists began applying lessons learned from the treatment and prevention of malnutrition during W.W.II to recently discovered nutritional problems in developing countries. Consequently, the agency plans for the developing countries usually entailed dried skim milk distribution and production projects since these had been successful in Europe. Throughout the 1950s and 1960s nutritionists concentrated on protein malnutrition and its clinical manifestation, kwashiorkor. Caloric deficiencies, which in severe cases led to marasmus, were of secondary importance as was emerging knowledge about the complex interactions of nutrition and infection. The apparent prevalence of protein malnutrition led nutritionists to draw attention to pre-school children and to develop high-protein dietary supplements. Agency policies reflected these developments and emphasized nutrition education projects, supplementary food distribution, and other schemes designed to tangibly impact nutritional status, especially of children.

The lack of progress against global hunger and malnutrition inspired the agencies during the late-1960s and 1970s to promote national development plans that prioritized the nutritional needs of the population. During the same period, many nutritionists drew attention to the declining protein intake of the poor and called for monumental efforts to increase protein production and availability. Although nutrition policies initially took note of this protein deficit, within a few years the nutritionists' fears were considered to have been reactionary. As a result of this and the largely uneven results of nutrition policies, the administrators tired of the influence of the nutritionists and created a new hierarchy that placed nutritionists lower on the ladder of power. Toward the end of the 1970s, nutritional enterprises lost their singular importance and were increasingly integrated with primary health care endeavours.

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Abbreviations

ACC - Administrative Committee on Co-ordination

ACST - UN Advisory Committee on Science and Technology to Development

AGN - Advisory Group on Nutrition

ANP - Applied Nutrition Project (or Programme)

ETAP - Expanded Technical Assistance Programme

FAO - Food and Agriculture Organization

FFHC - Freedom From Hunger Campaign

HOLN - Health Organisation of the League of Nations

IBRD - International Bank for Reconstruction and Development (The World Bank)

IFAD - International Fund for Agricultural Development

IIA - International Institute of Agriculture

LSHTM - London School of Hygiene and Tropical Medicine

MCH - Maternal and Child Health programmes

MCP - Milk Conservation Programme

PCM - Protein-Calorie Malnutrition

PEM - Protein-Energy Malnutrition

SCN - Sub-Committee on Nutrition

UN - United Nations

UNDP - United Nations Development Programme

UNICEF - United Nations Children's Fund

WFC - World Food Council

WFP - World Food Programme

WHO - World Health Organization

Chapter I

Introduction

Background

The quest to end hunger and malnutrition in the twentieth century, an endeavour most notably championed by the United Nations (UN) system during the last few decades, has followed a largely uneven and controversial course. This mighty goal stemmed from idealistic policy makers as well as seminal nutritional findings which emerged in the 1930s. Landmark nutritional research and idealism by the late-1940s suggested that through advanced agricultural techniques and inter-governmental co-operation, Malthusian prophesy could be proven wrong: food supplies could provide adequate nutrition for everyone. The vast dimensions of nutrition problems, however, required that the issue be explored and addressed from a variety of perspectives. This dissertation specifically examines the complex relationship between scientific nutritional work and UN nutrition policy directed at hunger and malnutrition in developing countries. By scrutinizing a contemporary topic, I have attempted to help bridge not only the historical divide between science and public policy, but the contemporary gap between historians and policy makers.

Nutrition provides an exceptionally rich resource for public health history research since a number of the puzzling central issues remain as salient today as several decades ago. By connecting nutritional science to developments in international nutrition policy, I have attempted to illuminate some of the murky dilemmas that have troubled nutrition experts and plagued nutrition programmes for decades. In the development field, it is remarkably difficult to delineate how scientific research was ultimately converted into policy and technical assistance. Frequently, ad hoc committees were assembled, conclusions were drawn, compromises were made, recommendations were interpreted, and official policy was stated. This bureaucratic process obscures the actual path of scientific findings and their arrival in policy. It is my intent to illuminate how this process functioned at three UN agencies: the Food and Agricultural Organization (FAO), the World Health Organization (WHO), and the United Nations Children's Fund (Unicef). My work seeks to fill two lacunae: firstly, it provides a historical perspective on the development of fundamental hunger and malnutrition policies. Secondly, it tracks the interrelationship of the major UN agencies concerned with malnutrition -- FAO, WHO, and Unicef -- in designing these

policies. Far from being a catalogue of nutritional projects, this dissertation directs its attention to the complex relationship between scientists and policy makers in the establishment of nutritional priorities and programmes. Because FAO, WHO, and Unicef were agencies largely borne out of post-W.W.II commitment to international organizations, the temporal zone of the dissertation runs primarily from W.W.II to 1978, a critical turning point in this history.

The bearing of malnutrition and hunger on many aspects of health, agriculture, and economics renders it a focal point of multi-disciplinary interest. Nutrition encompasses multifarious aspects of every human being's daily life and therefore scientifically provides the backboard for manifold sociological, anthropological, ecological, psychological, and agricultural queries. Although in the developed countries nutritionists have a substantial public and professional presence, this development is contemporary and coincides with the growth of the field during the last few decades. Given the public profile of nutrition issues in the developed world and today's prevalence of hunger and malnutrition in the developing world, it is difficult to imagine how, up until W.W.II, the nutritional status of populations throughout much of the world remained virtually untracked. In general, scientists working on nutrition before and long after W.W.II did not view themselves as "nutritionists", nor did they wish to be considered as such. Researchers in nutrition drew on academic backgrounds in other sciences such as pharmacology, biology, biochemistry, physiology, medicine, and organic chemistry. Well into the 1940s, scientists remained uncertain about the precise position of nutrition under the broader umbrella of science. One scientist in 1943 wrote confidently that "Nutrition, formally classified as a branch or aspect of physiology, and practically treated as an essentially autonomous science, has actually developed as a branch of the exact science of chemistry."¹ This comment illuminates the desire of nutrition enthusiasts to relate the discipline to older, more revered fields of science.

At least some of the problems associated with the nutritionists' place in professional circles emerged from the perennial uncertainty over the meaning of nutrition, a source of considerable controversy for the better part of the century. At a conference in 1939, the eminent scientist, Sir Robert McCarrison, presented a diatribe

¹ H. C. Sherman, *The Science of Nutrition*, New York, Columbia University Press, 1943, p. 149.

²no note (revised)

against the *improper utilization of*
the term nutrition. A flustered
McCarrison commented,

Few words in the English language are more often misused than the word 'nutrition.' It is commonly, indeed usually, employed as a synonym for 'food'; and sometimes it is spoken of as a condition of body depending on food. Actually, it is the sum of the processes-respiration, mastication, digestion, absorption, circulation, assimilation and excretion-concerned in the growth, maintenance and repair of the living body as a whole or of its constituent parts...nutrition implies function rather than food, acts and processes rather than their results.³

Dr. Donald McLaren, a prominent British nutritionist, has followed in McCarrison's footsteps and argued persuasively that "Nutrition on its own is not a science; it is an integral part of physiology, biochemistry, cell or molecular biology."⁴ He further distinguished nutrition from dietetics, remarking that nutrition is a physiological process whereas dietetics, which rests on nutritional principles, seeks to "maintain or improve health through optimal feeding practices".⁵ This dissertation shall use the term nutrition in its broadest, colloquial sense, essentially encompassing McLaren's definitions of nutrition and dietetics. Furthermore, I have employed the term nutritionist in a broad sense since many individuals occupied with nutritional issues were not qualified nutritionists. Thus, I have defined a nutritionist as one interested in nutritional issues and engaged in the field. The terms malnutrition and hunger require further clarification.

Hunger is often caused by gross food shortage and poverty which lead to inadequate intake of foods required for optimal physical and mental performance. Hunger is synonymous with undernutrition; in its acute form hunger is starvation, and widespread starvation is considered famine. Malnutrition refers to the inadequacy of one or several of the nutrients needed to function at potential. A person suffering from malnutrition may ingest sufficient calories for survival but may not eat enough of the right types of foods. Thus, hunger is essentially quantitative, and malnutrition is more qualitative. Protein-energy malnutrition, the most prevalent form of

³*Proceedings of a National Conference on the Wider Aspects of Nutrition*, London, British Medical Association, 1939, pp. 25-6. See also: Robert McCarrison, *Nutrition and National Health – being the Cantor Lectures delivered before the Royal Society of Arts.*, London, Faber and Faber Limited, 1936, pp. 12-16.

⁴Donald S. McLaren, 'Nutrition in medical schools: a case of mistaken identity', *American Journal of Clinical Nutrition*, 1994, 59, 960-63, on p. 961.

⁵*Ibid.*

malnutrition, involves a lack of protein and energy, but might be induced by early weaning, gastro-intestinal infection, or other infection. Unless otherwise noted, malnutrition will refer specifically to protein-energy malnutrition. Hunger strikes down people of all ages whereas protein-energy malnutrition tends to affect infants and pre-school aged children.⁶ This dissertation uses the terms hunger and malnutrition loosely, reflecting a measure of convenience as well as acknowledgement that the historical differences between the two were often blurred in policy contexts.⁷

Nutritional Efforts

The manifestations of nutritional deficiencies have been well-known in the developed countries for centuries. Their identifiability as avitaminoses or nutritional inadequacies, however, could not be confirmed until the explosion of scientific evidence ignited in part by ^{the nutritional work of} Casimir Funk and other scientists in the second decade of the century.⁸ While a plethora of research on the direct relationship between nutrition and health followed during the two ensuing decades, the existence and prevalence of nutritional disorders in the developing world principally remained a scientific point of ignorance. Some of the data which appeared emanated from anthropological work, such as Audrey Richards' famous study, *Hunger and Work in a Savage Tribe*. Her experience with the Southern Bantu led her to a vastly more illustrative image of hunger than her medical counterparts in the colonies. Richards wrote in 1932 that

Hunger leads first, it is true, to the concentration of the whole energy of the body on the problem of getting food. Every thought and emotion of the starving man is fixed on this one primary need. But if he fails to obtain it, there are no complex psychoses for observation,

⁶Donald S. McLaren, 'Nutrition policy, planning, and programmes: a personal overview', in D. S. McLaren (ed), *Nutrition in the Community*, Chichester, John Wiley & Sons Ltd., 1983, table on p. 13.

⁷For example, in 1960 a WHO nutrition officer sought to clarify the definition of malnutrition for an FAO colleague. Attributing his conception of the term to B. S. Platt and other prominent nutritionists, he wrote that malnutrition encompassed undernutrition, overnutrition, and an "imbalance of various nutrients." F. W. Lowenstein, letter to K. K. P. N. Rao, 4 March 1960, WHO Archives, box A.0916. A year earlier, W. R. Aykroyd, the director of FAO's Nutrition Division, suggested that the term hunger signified "insufficient food" as well as a "lack of the nutrients needed for health." W. R. Aykroyd, letter to W. H. Pawley, 6 July 1959, FAO Archives, FAO office of ADG, Dr. M. Ezekiel, FFHC files, titles A-E.

⁸Casimir Funk, *The Vitamines*, Harry E. Dubin, Translator, 2nd ed., Baltimore, Williams & Wilkins Company, 1922.

but merely the gradual lowering of the whole vitality of the body, and the lethargy which leads to death.⁹

Richards and only a few others were conspicuous in their interest in hunger in the developing countries during the 1930s. While Richards was out in the field, there were many in the laboratory who were building on Funk's insights. Related developments during the 1930s enabled McCollum and other researchers to remark that 1940 marked "the achievement of the primary objectives set by pioneers in [nutritional research]".¹⁰ The major vitamins and vitamin deficiencies had apparently been identified, and it seemed the conquest of nutritional diseases was then within reach.

Although ambivalence toward the developing world might be identified as the force that prevented extensive nutritional research there prior to W.W.II, it also seems plausible that researchers, physicians, and scientists in industrialized countries were absorbed with the health problems in their own countries. Throughout the 1920s and 1930s, the focus of much nutritional concern was clinically-defined avitaminoses; devastating forms of undernutrition and malnutrition such as kwashiorkor and marasmus, to date ill-defined, went virtually unnoticed. Furthermore, the results of subtler forms of malnutrition and hunger had not been scientifically explicated. Nutritional problems at the centres of nutritional research in England and the United States still loomed prominently enough to attract a great part of resources. Nutritionally-related health problems in developed countries fuelled the thrust behind initiatives which encouraged national milk distribution programmes and school feeding. After W.W.II, improvements in communications, science, and international medical staff in the developing world began to elaborate the gross nutritional inadequacies in day-to-day life in Asia, Latin America, and Africa. While scientific interest in the developing world sprouted in a number of health-related fields, nutrition rapidly stood out as a central point for concern, policy, and investigation.

⁹ Audrey I. Richards, *Hunger and Work in a Savage Tribe*, London, George Routledge & Sons, Ltd, 1932, p. 2.

¹⁰ E. V. McCollum, *A History of Nutrition*, Boston, 1st ed., Houghton Mifflin Company, 1947, p. 420.

Nutritional Thought

When I embarked on this dissertation, my nutritional knowledge drew primarily from my public health work and training as well as from previous investigations in public health history. With my interest in contemporary public health history and new-found enthusiasm for nutrition history, I expected that Thomas McKeown's influential work might become an important element of my dissertation. In the final analysis, his findings served as a valuable starting point.

The failure and shortcomings of technological solutions to public health problems in part inspired McKeown's popular investigations on the history of human disease. Contemporary, conventional wisdom during the nineteenth and twentieth centuries attributed improvements in health, particularly the tremendous drops in morbidity and mortality rates, to public health measures and medical advances. To the contrary, McKeown asserted that public health and medicine affected individual outcomes but had only a negligible effect on overall rates. After examining morbidity and mortality in Great Britain, McKeown deduced that the only possibility for the main cause of the fall of mortality had been improved nutrition. McKeown asserted that most public health measures and scientific advances had only a negligible impact on the mortality rates during the latter half of the nineteenth century (and into the twentieth). In regard to one mythically important public health measure he wrote, "I conclude that immunization and treatment contributed little to the reduction of deaths from infectious diseases before 1935...and were much less important than other influences."¹¹

McKeown tried to muster support for the role of improved nutrition by concluding "that the decline of mortality from infectious diseases was not due to a change in the character of the diseases, and that it owed little to reduced exposure to micro-organisms before the second half of the nineteenth century or to immunization and therapy before the twentieth".¹² His broad interpretation of limited evidence led to a forceful attack on his views, best embodied in Simon Szreter's essay, 'The importance of social intervention in Britain's mortality decline c.1850-1914: a re-interpretation of the role of public health'. McKeown had argued vehemently against the role of public health in Britain's mortality decline -- Szreter reinterpreted much of McKeown's own data and evidence to provide an alternative and contradictory interpretation. Marshalling his most potent public health indicators, Szreter stated that

¹¹Thomas McKeown, *The Modern Rise of Population*, London, Edward Arnold, 1976, p. 109.

¹²*Ibid.*, p. 128.

"The all but complete eradication by the end of the [nineteenth] century of typhoid, cholera, and smallpox each testify in different ways to the importance and effectiveness of various aspects of the large-scale strategic public health measures which were introduced during this period."¹³ The decline of these three diseases, according to Szreter, demonstrated that public health played a sufficiently pro-active role to avert epidemics, and ostensibly to promote a decline in mortality rates. The virtual eradication of the diseases Szreter cited could, at least better than any other infirmities, be correlated with improvements in public health. McKeown, however, masterfully demonstrated that the decline of these diseases had little bearing on the mortality rate in England. Smallpox, for example, could be associated with only 1.6% of the mortality decline from the mid-nineteenth century to 1971.¹⁴

McKeown's and Szreter's arguments provided a clarifying framework through which to examine nutrition history. McKeown represented a medical perspective which placed the advancement of health on a nutritional foundation. Szreter, on the other hand, credited public health, medicine, and technological improvements. Their arguments identified two of the central themes that course through nutrition policy and ideology, though they did not significantly address or influence the historical events themselves. Although McKeown at times projected his findings in a cursory manner on the developing world, in general he focused on his original data set from Britain.¹⁵ In spite of the parallels between McKeown's ideology and developments in nutrition which occurred during the time of his writing, he rarely alluded to contemporary evidence for his conclusions. I therefore found that his work and its criticism provided an intellectual backdrop for my methodology rather than substantive evidence for the history presented.

Historiographical Background

Among the many people who worked directly and indirectly on nutrition issues around the globe during the time period covered herein were planners, field workers, economists, anthropologists, and agriculturists. In order to maintain focus, I have attempted to follow those who were linked directly to outstanding work in nutritional

¹³Simon Szreter, 'The importance of social intervention in Britain's mortality decline c.1850-1914: a re-interpretation of the role of public health', *Social History of Medicine*, 1988, 1(1), 1-37, on p. 26.

¹⁴Thomas McKeown, *The Origins of Human Disease*, Oxford, Basil Blackwell Inc, 1988, p. 80.

¹⁵In the 1980s McKeown did carry some influence on WHO expert committees, including a WHO expert report on health strategies. Kenneth S. Warren, 'Health for all by the year 2000?', in *1990 Britannica Book of the Year*, Chicago, Encyclopaedia Britannica, Inc., 1990, pp. 21-30, on p. 25.

science and nutrition policies at the highest levels. The published record for this history does little to describe the flow of events and leading influences. From the dry agency texts, little can be gleaned about the nature of the personalities, the personal and professional clashes, and the real issues at stake. This dissertation attempts to trace the formation of policies which specifically targeted hunger and protein-energy malnutrition. Other malnutritional diseases such as rickets, beriberi, pellagra, scurvy, and xerophthalmia have been treated peripherally, if at all. The pivotal reason for focusing on hunger and protein-energy malnutrition is that together, they were believed to affect more people than all the other nutritional diseases combined. Even today, hunger is believed to affect approximately one billion people and malnutrition over one half a billion.¹⁶ Furthermore, the broad policy developments during the time period covered sought the global conquest of hunger and protein-energy malnutrition since these two afflictions were ubiquitous in the developing world.

Several contemporary histories offer personalized and scholarly accounts of developments in various aspects of nutritional work such as pellagra, kwashiorkor, vitamins, and the avitaminoses. Many of the most substantive and enlightening pieces on nutritional history have covered the nineteenth century and the inter-war period. Several of these histories provide important scientific and organizational background relevant to the scope of this dissertation. *The History of Public Health and the Modern State*, provides useful background information on the state of public health in developed countries, as well as a couple of developing country case studies and a primer for international public health.¹⁷ *International health organisations and movements, 1918-1939*, presents several important essays on the form of international health endeavours before the UN with important emphasis on the Health Organisation of the League of Nations.¹⁸ Further information about the formation of international health organisations as they related to WHO is encountered in *International Public Health between the Two World Wars - The Organizational Problems*.¹⁹ For a scientific perspective on nutrition prior to W.W.II, *The Science and Culture of*

¹⁶Donald S. McLaren, op. cit., note 6 above, table on p. 13.

¹⁷Dorothy Porter (ed), *The History of Public Health and the Modern State*, Amsterdam and Atlanta, Editions Rodopi B. V., 1994. Celia Petty has written a fine overview of the relationship between nutritional research and public health in Britain during the inter-war years. See: Celia Petty, 'Primary research and public health: the prioritization of nutrition research in inter-war Britain', in Joan Austoker and Linda Bryder (eds), *Historical Perspectives on the Role of the MRC*, Oxford, New York, and Tokyo, Oxford University Press, 1989, pp. 83-108.

¹⁸Paul Weindling (ed), *International health organisations and movements, 1918-1939*, Cambridge, Cambridge University Press, 1995.

¹⁹Norman Howard-Jones, *International Public Health between the Two World Wars - The Organizational Problems*, Geneva, WHO, 1978.

Nutrition, 1840-1940, contains many interesting pieces.²⁰ Two of the finest collections of edited primary source material on early international nutritional work in Colonial Tanganyika and Nyasaland are: *The Culwick Papers 1934-1944* and *The Nyasaland Survey Papers 1938-1943*.²¹

Few histories have broached the topic of nutrition policies since W.W.II. There have been a handful of histories written about the UN agencies treated in this dissertation. By and large, these have either been commissioned by the agencies themselves, written by insiders, or some combination of the two. At the rare moments when they have addressed nutritional issues, they have shirked thoroughness and historical analysis in favour of simplicity. Maggie Black's history of Unicef stands out in this league. Although it is not an official Unicef document, its uncritical, cheering tone detracts from the impressive breadth of historical insights presented.²² John Charnow and Margaret Gaan wrote an unpublished history of Unicef that provides a reasonable, though sterile, view of major developments up to the early-1960s.²³ Ralph Phillips' *FAO: its origins, formation and evolution 1945-1981*, is little more than a glorified organizational plan, complete with important dates and selected policy changes.²⁴ FAO's own history, *FAO: The First 40 Years*, though picturesque, falls appallingly short on detail.²⁵ John Abbott's *Politics and Poverty: A Critique of the FAO of the UN*, overlooks nutritional endeavours and presents a contemporary argument with few historical references.²⁶ WHO has published a few books which predictably applaud its work, including *The First Ten Years of the World Health Organization*, and *The Second Ten Years of the World Health Organization*.²⁷ These books are essentially propaganda based on a few high-profile organizational accomplishments. Nevertheless, they offer a reasonable presentation of basic

²⁰Harmke Kamminga and Andrew Cunningham (eds), op. cit., note 12 above. David Smith's forthcoming volume will also provide important point of view from the British perspective. David Smith (ed), *Nutrition in Britain: Science, scientists and politics in the twentieth century*, London and New York, Routledge, in press. Smith's Ph.D. dissertation offers a comprehensive account of nutrition in Britain. David Smith, 'Nutrition in Britain in the Twentieth Century', University of Edinburgh, 1986.

²¹Veronica Berry (ed), *The Culwick Papers 1934-1944: Population, Food and Health in Colonial Tanganyika*, London, Academy Books, 1994. Veronica Berry and Celia Petty (eds), *The Nyasaland Survey Papers 1938-1943*, London, Academy Books, 1993.

²²Maggie Black, *The Children and The Nations: The Story of Unicef*, Hong Kong, Unicef, 1986.

²³John Charnow and Margaret Gaan, *History of Unicef*, Unicef Archives, 1965.

²⁴Ralph W. Phillips, *FAO: its origins, formation and evolution 1945-1981*, Rome, FAO, 1981.

²⁵*FAO: The First 40 Years*, Rome, FAO, 1985.

²⁶John Abbott, *Politics and Poverty: A critique of the Food and Agriculture Organization of the United Nations*, London and New York, Routledge, 1992.

²⁷*The First Ten Years of the World Health Organization*, Geneva, WHO, 1958, and *The Second Ten Years of the World Health Organization, 1958 - 1967*, WHO, Geneva, 1968.

organizational bearings. Several other books have given broader overviews of international agency work. Neville Goodman's *International Health Organizations* is a good collection of far-flung data, and Ross Talbot's cursory writings contribute a few titbits of important information on the international food agencies.²⁸ Charles Glen King's history of the Nutrition Foundation delivers some basic guidance for tracking down important figures in international nutrition policy from 1941 to 1975.²⁹

Among the areas where one encounters a dearth of historical enterprises is nutrition policy, particularly within the UN system. The shining star in this historical field is Kenneth Carpenter's book, *Protein and Energy*, an important account of this interaction which includes a few chapters dealing with UN agencies.³⁰ Additionally, Victoria Quinn's published dissertation, *Nutrition and National Development: An evaluation of nutrition planning in Malawi from 1936 to 1990*, provides some fine background material and a micro-analysis of nutrition which effectively reflects many of the trends recorded in this dissertation. While she describes the role of UN policies in Malawi, she infrequently elaborates on the broader macro-level formation of nutrition policy.³¹ The other significant secondary sources are the personal historical perspectives that have appeared in UN-supported periodicals and in prominent medical journals. As would be expected, these articles are peppered with their own biases and agendas and have therefore been treated delicately.

In this variety of sources, I found that no one source was devoid of significant pitfalls threatening its central conclusions and presentation. While I generally trusted the dates provided in documentation, I scrutinized the "facts" found within. Although oral history provided me with a springboard for diving into select issues, the bedrock of the dissertation is in the documents, most of which are unpublished. Even the most comprehensive sources failed to reflect the full breadth of correspondence and decision-making within an agency. The volumes of the FAO Conference and Council, the WHO Health Assembly, the *Yearbook of the United Nations*, and the *PAG Compendium*, generally present only the blandest of events suggesting a silky smooth

²⁸Neville M. Goodman, *International Health Organizations And Their Work*, Edinburgh and London, Churchill Livingstone, 1971. See also: Ross Talbot, *The Four World Food Agencies in Rome*, Ames, Iowa, Iowa State University Press, 1990 and Ross Talbot, *Historical Dictionary of the International Food Agencies FAO, WFP, WFC, IFAD*, Metuchen, New Jersey, The Scarecrow Press, Inc., 1994.

²⁹Charles Glen King, *A Good Idea: the history of the nutrition foundation*, New York and Washington, The Nutrition Foundation, 1976.

³⁰Kenneth J. Carpenter, *Protein and Energy: A Study of Changing Ideas in Nutrition*, New York, Cambridge University Press, 1994.

³¹Victoria J. Quinn, *Nutrition and National Development: An evaluation of nutrition planning in Malawi from 1936 to 1990*, Den Haag, CIP-Data Koninklijke Bibliotheek, 1994.

linearity between policy changes.³² While these sources often provide relevant minutiae, they are largely devoid of colour and thoughtful insights. This documentation provides the expectedly clinical public record which often clashes with the correspondence and other sources I uncovered. The main published resource on the Protein Advisory Group of the United Nations (PAG), the *PAG Compendium*, neglects numerous informative and important documents, especially those related to the PAG's decline in the 1970s. Based on the volumes alone, one would have an unabashedly positive view of the PAG and certainly could not foresee its demise in the mid-1970s.

At times I have relied on provisional agenda items more than the actual proceedings of certain conferences because the provisional work shed more light on nutritional policy than was apparent in the final documentation. This was the case, for example, at the World Food Conference of 1974. In a few instances, I have made use of preliminary or proposed committee and conference reports because they have been more impressive than the watered-down final versions. Since such proposed reports sometimes contain information that a party disagreed with, I have checked the final documents to ensure the validity of my remarks. When possible, I have only cited journal articles which I know carried some weight or were at least read by administrators at the agencies. In this manner I have tried to present a more accurate picture of the forces involved in the making of policy. The assorted FAO/WHO Expert Committee on Nutrition reports are useful benchmarks for examining trends in nutritional thought.³³ Far more than being the inventor of nutritional issues, the committee came to build its recommendations on ideas that had been percolating in nutrition circles and eventually moved up to a policy level. Unfortunately, due to the nature and abundance of the expert committee meetings, few interviewees were able to provide me with detailed information about any given meeting. The record itself does little to reflect the animosities that might have been present. Further, the final reports were usually written by one or two members of the committee. Thus, these documents served well as road guides, but have necessarily limited narrative appeal. On this note, it is important to remark on the timing of trends.

Although I have consistently mentioned the years of nutrition congresses and committee reports, I have done so in order to provide only a general chronology of the

³²*Yearbook of the United Nations*, Office of Public Information, United Nations, New York, 1-33, 1947-1980.

³³In cases where committee meetings have been co-sponsored by the agencies and co-published, such as the Joint FAO/WHO Expert Committee on Nutrition meetings, I have tried to provide bibliographical information on both agency's publications.

flow of events. However, many of the sources I utilized that exposed clear-cut changes in modes of thought or action were merely reflections of currents that had been under way for years beforehand. The seeds of the "Great Protein Fiasco" can be seen decades before the famous article by this name was published, and I have purposefully pointed this out through other, earlier sources. By the same token, many of the major topics I have presented -- from malnutrition and infection to national nutrition planning -- have histories which reached back for years before they were served on the policy table. Where appropriate, I have highlighted sources which point to a continuum of ideas that eventually rose to a policy level. For example, although Unicef declared its commitment to applied nutrition programmes in 1957, such ideas and projects had been considered for years beforehand. Since this dissertation is primarily concerned with policy, I have shaped my presentation around the ideas which shaped such policy as well as on the policy itself.

Due to the scarcity of relevant secondary sources for UN nutrition policy, I turned early in this work to primary sources and oral history. I have found agency correspondence to be the most expressive and reliable resource for this project. Even given its moulding by murky ulterior motives, I found that correspondence generally presented the clearest picture of what were perceived to be the central issues and concerns. Whereas recall bias, egos, and revisionist viewpoints invariably influenced oral histories, the written record, for all its flaws, provided an original and unmodified perspective. Unicef, FAO, and WHO have preserved impressive archives complete with a plethora of important personal and professional letters. I spent the majority of my archival research time sifting through the thousands of documents in the files of the individuals responsible for nutrition at the agencies. At FAO and WHO, the nutrition heads were demarcated clearly, whereas at Unicef, I focused on deputy-director E. J. R. Heyward's files as well as on the chief Unicef nutritionist. Additionally, in order to illuminate inter-agency relations, I examined the correspondence of the assorted liaison officers who finessed and communicated policy changes. Among the many gaps that surfaced in the correspondence records was the failure of the FAO Archives to maintain nutrition correspondence from the period 1971-1978. Fortunately, many FAO documents from this time were preserved by WHO and Unicef. As a general rule, correspondence marked "Confidential" provided the greatest insights into the machinations of the scientists and policy makers involved in a given issue. These same pieces, ironically, also seemed to be the most highly reproduced at the time and often appeared in all the archives. Evidently, the authors labelled letters "Confidential" when they wished to be certain their words would be read carefully. The correspondence

crossover well reflects how few nutrition decisions occurred unilaterally, and most subjects were discussed among personnel at FAO, WHO, and Unicef. I gave considerable weight to certain pieces of correspondence that well depicted currents, concepts, and debates and which were often the most widely reproduced and criticized. The minutes and other records I came across for meetings such as the Joint Health Policy Committee (FAO/UNICEF and WHO/UNICEF) as well as for the PAG were often so highly revised and non-committal that little could be gleaned from them.

Much of the central evidence and insights contained in this dissertation emerged from a dozen and a half oral histories I conducted, in addition to correspondence and conversations with another two dozen nutrition experts and UN personnel. The contacts I developed during another contemporary public health history project in this time period provided rapid connections to key living sources for this dissertation. While conducting the interviews, I followed Saul Benison's advice for such undertakings which includes orienting oneself with relevant primary and secondary sources, using this information to draw the history from the interviewee, and cross-checking the interviewees' words with the sources.³⁴ Although the commentary I collected was immensely helpful, the process of eliciting it was frustrating and time consuming. On occasion I carried out a dozen hours of background research only to find that the interviewee could recall nothing more than events during the past decade. In fairness, the questions I asked invariably required a mental search which at times spanned back more than fifty years. Except on rare occasions, interview questions did not come within two decades of the present. I therefore often used correspondence I had uncovered and committee or meeting reports to jog the interviewee's memory and elaborate on undocumented influences in the written record. Frequently, however, the experts and policy makers confused the historical record, mixing events, actors, and locations in such a way as to defeat utterly their credibility. At other times the oral histories helped flesh out historical ambiguities in a way which was consistent with the record I compiled. On several instances the interviewees blurred their roles and presented viewpoints that closely correlated with their contemporary opinions but not their past stands. On other occasions the interviewees contradicted the written record but provided enough supporting sources and leads for appropriate modification. Finally, at times the correspondence I presented to the interviewees re-ignited otherwise suppressed passions and animosity.

³⁴Saul Benison, 'Oral history, a personal view', in Edwin Clarke, *New Methods in the History of Medicine*, London, Athlone Press, 1970, 286-305 on p. 291.

In a history such as this, which is evolutionary as opposed to revolutionary, it is difficult for the historian as well as for his subjects to pinpoint the historical moments which represented "change". By and large this is not a history of breakthroughs or break-ups, of invention or epiphany. Rather, it is more like the history of a wave, changing form, strength, intensity, and direction as it makes its way through time and space. Oral history forms a far larger part of the backdrop of this dissertation than the footnotes alone would insinuate. It was largely through discussing this history with giants in the nutrition field who lived through it all -- Gopalan, Autret, Scrimshaw, Waterlow, Béhar, and Heyward among them -- that I came to find the pressure points in history worth examining in detail. Their words and perspectives frequently guided me to specific events and evolving ideas that were significant and helped me find a foothold in this craggy and lengthy history.

Not only did oral history provide me with important background that had to be cross-checked with other sources, but it also gave me a better idea of the type of people these men were. Marcel Autret, although a man of eighty-seven when I interviewed him, still had a touch of the arrogance, stubbornness, and vigour which characterized him during his career. Scrimshaw, whose robust spring of energy has enabled him to travel, talk, and publish without cessation until today, exhausted me during a one-hour hike in the mountains behind his home in New Hampshire. Since he was among the most frank and forthright interviewees, I compensated for bias by being especially critical of his commentary. Waterlow and Béhar were staid gentleman, always quick to discuss what "really" happened, but also fast to point out the inherent difficulties in recalling history. Donald McLaren's feistiness -- the trait which was apparent in his critical writings -- was as alive in person as it was on paper. Peter Greaves, Ken Bailey, and Felicity Savage were extremely helpful in giving me a view from the field. E. J. R. Heyward, another nutrition enthusiast well into his eighties, demonstrated his command of the issues and his eloquence, along with his trademark uncushioned criticism. Ralph Phillips, who has followed FAO from its inception to the present day, provided important background information, especially on the inner-workings of FAO. Additionally, since he himself was not nutritionally-oriented, he gave me an outsider's view of nutritional progress and problems from FAO's earliest days.

My perceptions and impressions of these nutrition workers influenced my use of their perspectives and the value accorded their word. Since some of the interviewees were more forthcoming with their insights and made themselves more accessible, I have inevitably made greater use of certain individuals' views. However,

by cross-checking their stories with other sources, I have attempted to present the history as it was perceived not only by the interviewees, but by their colleagues as well. While this dissertation focuses on most of the key players in nutrition, there were a few important figures who have necessarily been left out. This has been in part due to the nature of the resources uncovered, the inaccessibility of these individuals, and also because I felt that overall, I presented a sufficiently wide range of perspectives to cover the major points of view. In areas where I have focused on a particularly influential person's perspective it has been in the interest of articulating their stance in the context of popular debate. Scrimshaw, for example, by nature of his immense influence and ubiquitous presence in nutritional politics and science, is frequently cited. In addition to the oral histories that I conducted, I made substantial use of nearly two dozen oral histories from the 1980s which were part of Unicef's history project.

Statistics, particularly nutrition statistics, are sufficiently complicated and abstruse as to be of little value on their own. I have made very careful use of statistics on nutrition spending since across the agencies there are tremendous inconsistencies in accounting methods. While it is relatively easy to determine the amount of funds Unicef, FAO, and WHO spent on specifically designated nutrition projects, figures for projects in other fields which included a nutrition component are difficult to extract. A team from Harvard tried to determine nutrition expenditures for Unicef between 1964 and 1973 and ended up flustered by the task. They found that while nutrition activities fluctuated between four and six million dollars during these years, as a percentage of the total budget, nutrition's share appeared to decline from 17.5% to 7.4%. There was a major caveat, however, that the responsible consultant included:

During the past ten years, nutrition programmes have been increasingly integrated into other programmes for greater efficiency. Thus the funds are more diffused, but do not necessarily represent a decrease in funding for nutrition. Accurate statistics on how much actually goes specifically toward nutrition is not possible in increasingly integrated programmes.³⁵

Nevertheless, broad comments by the executives at the agencies often revealed that despite the perturbations caused by nutrition components being shifted to other programmes, nutrition spending itself did decline. The Unicef Executive Board in

³⁵John Etridge (consultant), letter to L. Teply, 8 October 1974, Unicef Archives, 88R025, Box T-006, Teply Files. See also: Les Teply and John Etridge, letter to Jean Mayer on Unicef nutrition statistics, 1 November 1974, Unicef Archives, 88R025, Box T-006, Teply Files.

1971, for example, noted that nutrition spending, even considering shifts of nutrition responsibilities, had declined substantially. The Board cited a lack of "quick and easy" methods for addressing the problem and the ignorance of governments as the primary causes.³⁶ Thus, the verbal and statistical record have interacted to inform my presentation of increases and decreases in nutrition expenditures. Particularly after 1960, nutrition concerns were woven tightly into the content of a broad range of programmatic initiatives which defy financial exegesis. The supporting documentation I have cited, however, couches the figures I deem accurate in terms of the more indicative personal views of nutrition spending levels.

Overview

Based on the documentation above, I have divided the history of nutrition and nutrition policy into seven main historical chapters which are ordered chronologically from roughly 1935 to 1978. The principal focus, however, is on the years 1948 to 1978 with increased attention placed on developments later in the history since greater nutritional developments were then occurring. To the best of my knowledge, this is the first comprehensive historical work on the role of nutrition in the UN agencies. In Chapter II, I present a broad overview of the state of nutritional science as it related to developing countries before W.W.II. Included in this description is a closer look at the endeavours of the Health Organisation of the League of Nations which, before its closure, began to cast light on nutritional issues in developing countries. John Boyd Orr became a leading international figure in nutrition during this period, and the chapter concludes with his brinkmanship of the nascent FAO.

Chapter III covers the birth during the late-1940s of two additional UN agencies concerned with nutrition: WHO and Unicef. The first, uneasy years of these organizations reflect the pervasive ignorance of hunger and malnutrition in developing countries and the pressing commitments to cope with looming hunger problems in war-ravaged Europe. Scientifically, however, a small cadre of clinicians were becoming increasingly interested in nutrition of the developing world, and set to work defining the problems there. Initial findings spearheaded by FAO and WHO identified kwashiorkor, a striking nutritional disorder, as the principal concern. During the early-to mid-1950s expert committees and nutrition conference became the fertile ground on which to address and publicize nutritional developments. Unicef was expected to be an aid agency and to rely solely on FAO and WHO, the "specialized agencies", for

³⁶Report of the Unicef Executive Board', New York, April 1971, E/ICEF/612, paragraph 85.

technical advice. Inter-agency relations quickly showed some signs of strain while momentum grew for promoting protein-related policies. By the mid-1950s, the nutritionists and the agencies had truly begun to reach out to the developing countries where they perceived protein deficits to be the most pressing concern. Protein concerns led to the formation of the PAG, a group of scientists dedicated to advising the UN agencies on the technical aspects of protein issues.

In Chapter IV, we turn to the initially misguided application of supplementary food programmes in the developing countries on school-aged children, rather than the needier pre-schoolers and infants. We see that protein had attracted the attention of the development community, especially as it fit neatly into the widely practised disease-based approach to medicine. If protein malnutrition were the central ailment, then the delivery of adequate protein would "solve" the deceptively-simple conundrum. Since the lack of a high-protein weaning food appeared to be the primary point of malnutrition troubles, nutritionists sought to develop formulas to address the problem, in part through the PAG. During the late-1950s, new interest and a major report on the relationship between nutrition and infection piqued scientific interest and provided further illumination of the complex nature of malnutrition. FAO, WHO, and Unicef, though frustrated by inter-agency politics, pressed forward with nutrition education programmes (called applied nutrition projects) to target, among other things, ignorance. These endeavours were believed to be more effective than the more popular supplementary feeding schemes. From the field perspective, the distance between headquarters and recipients was growing fast, and philosophical differences about nutritional approach began to rise in prominence.

In Chapter V, which covers the early-1960s, the political rhetoric on nutrition becomes more colourful and ambitious than it had been since the days of Orr. FAO launched its bold Freedom From Hunger Campaign, and a publicity blitz placed hunger and malnutrition in the international spotlight. The agencies continuously searched for new ways to entice governmental support for nutrition programmes and began suggesting that nutritional support could foster economic development. Applied nutrition projects came under fire as positive results were not forthcoming, and Unicef began to acknowledge the importance of having its country operations individualized to meet the variance in local needs. With the initiation of the World Food Programme under the auspices of the UN and FAO, Unicef was able to further de-emphasize feeding programmes and focus on other methods for improving childhood health. The spheres of influence of the PAG continued to expand, and tensions between FAO and Unicef flared. In 1964, in an effort to raise the status of children's nutritional issues,

Unicef called a major international conference at Bellagio which substantively transformed international nutrition discussions.

In Chapter VI, we move to the character of nutrition politics during the late-1960s and the simmering debates over the focus of nutrition policies. The eminence of kwashiorkor as the leading nutritional problem was attacked and contemporaneously, the general nature of nutrition policies also came under fire. Furthermore, newer knowledge of the effects of malnutrition on learning and behaviour suggested that the intellectual potential of hundreds of millions of children was at stake and provided further thrust to nutritional undertakings. Nevertheless, the concept of a protein crisis came to dominate the UN agenda and a global nutrition disaster seemed perched over the horizon.

Chapter VII recounts how the momentum for interest in protein, which had built up during the previous two decades, finally stalled, only to be replaced with similarly ill-fated calls for nutrition planning. Expert committees had a difficult time reaching consensus on the protein requirements necessary for human life, and politics at FAO and WHO witnessed a decline in the importance of nutrition. Applied nutrition programmes attracted some renewed interest just as the world food crisis shifted attention from specific nutrition problems to food deficits. The PAG floundered in its decreased relevance to the UN system, and the World Bank took its first steps in the nutrition field, effectively ending the uniform dominance of WHO, FAO, and Unicef.

Chapter VIII is the final section focused on historical description and closely examines the years 1974 to 1978. This was a time of tremendous change at all the UN agencies dealing with nutrition, and ideological and structural transformations were at work. Intensely analytical nutrition planning was a brief fad for nutrition experts, and their last opportunity in this history to capture the policy makers' full attention. The PAG folded and passed on its legacy to a UN sub-committee on nutrition which elevated the policy makers over the nutrition experts. New studies in malnutrition and infection were pointing toward the possibility that more horizontal development techniques which, for example, dealt with infection, might be as effective as nutritionally-based methods for preventing malnutrition. At roughly the same time, a WHO/Unicef conference established primary health care as the inter-agency approach to improved health, and ostensibly to improved nutrition status.

Finally, in Chapter IX, I provide an overview of the previous chapters with an eye toward elucidating the major changes in nutrition policy and science which brought about the vastly evolved position of nutrition in the UN system by 1978.

Chapter II

The Backdrop of UN Nutrition Agencies

...no one who undertakes to study, as we have done, the evidence which is available regarding the nutrition of colonial peoples can fail to be deeply impressed by the great range and complexity of the problem and by the extent to which our knowledge of it is still imperfect and incomplete...where the facts of the problem are clear the solution may still await discovery...the problem of malnutrition is still to a considerable degree also a scientific problem.

Nutrition in the Colonial Empire, a report by the Committee on Nutrition in the Colonial Empire, London, 1939¹

Introduction

A number of circumstances between W.W.I and W.W.II allowed large-scale international co-operation on nutritional health issues to move ahead for the first time. In this chapter I shall touch on many of the individuals, ideologies, events, and investigations which became the bedrock on which UN agencies involved in nutrition formed. The International Institute of Agriculture (IIA), created in 1905 by David Lubin, a Polish-American merchant, was the first international, intergovernmental organization to demonstrate interest in agricultural issues.² Although the IIA did not work tactically on nutrition as would the Health Organisation of the League of Nations (HOLN), its work, particularly after W.W.I, contributed to raising international consciousness of agricultural concerns linked to health.³

Historian Michael Worboys argued cogently that malnutrition was "discovered" between the wars. According to him, "the direct transfer of the 'dietary

¹*Nutrition in the Colonial Empire, First Report-Part I*, London, His Majesty's Stationery Office, 1939, p. 133.

²R. W. Phillips, *FAO: its origins, formation and evolution 1945-1981*, Rome, FAO, 1981, p. 3. IIA was situated in Rome, future site of all other major international food and nutrition agencies.

³Although Weindling and Dubin have adopted the term "The League of Nations Health Organisation" (LNHO) to refer to this agency, the historically correct term is The Health Organisation of the League of Nations. See: Martin David Dubin, 'The League of Nations Health Organisation', in Paul Weindling (ed), *International health organisations and movements, 1918-1939*, Cambridge, Cambridge University Press, 1995, pp. 56-80, and Paul Weindling, 'The Role of International Organizations in Setting Nutritional Standards in the 1920s and 1930s', in H. Kamminga & A. Cunningham (eds), *The Science And Culture Of Nutrition, 1840-1940*, Amsterdam and Atlanta, Editions Rodopi B. V., 1995, pp. 319-332.

survey' from the centre to the periphery" resulted in the widespread discovery of malnutrition in the Colonial Empire.⁴ Worboys explained that a science of nutrition, called "the new science of nutrition", was required to analyze and essentially establish the existence of malnutrition in the colonies. These important findings followed W.W.I, which in part had led to the formation of the HOLN, situated in Paris.⁵ Initially the HOLN dealt with health problems in Europe and North America, particularly the spread of epidemics such as cholera, measles, and tuberculosis. In the area of nutrition, there was scattered work on international nutrition issues which appeared in the *Quarterly Bulletin of the Health Organisation*. Overall, concern for nutrition -- both scientific and political -- generally remained in the realm of technologically developed countries.⁶ Thus, although malnutrition may have been discovered in the developing countries *before* W.W.II, its treatment there would have to await the programmes and policies of a post-war world.

In the *Progress of the Science of Nutrition In Japan*, one of the few nutritionally-oriented reports the HOLN published during the 1920s, the editor wrote that nutritional problems could be classified under two major headings: physiological and economic. From the physiological perspective he advocated the need for scientific information on what the human body requires and how the necessary nutrients could best be obtained. From the economic perspective, he called for information about how these essential foods could "most profitably [be] utilized in conformity with the economic resources of each country."⁷ This statement, along with others from the HOLN and other sources, hoisted the dichotomy in the dialogue about nutrition -- economics versus science -- above the heads of politicians and scientists. All comprehensive debate on hunger that followed included some mention of these pivotal issues.

⁴M. Worboys, 'The discovery of colonial malnutrition between the wars', in D. Arnold (ed), *Imperial medicine and indigenous societies*, Manchester and New York, Manchester University Press, 1988, 208-26, on p. 222.

⁵For a basic description of the formation of the HOLN see Martin David Dubin, op. cit., note 3 above. See also: Neville M. Goodman, *International Health Organizations And Their Work*, 2nd ed., Edinburgh and London, Churchill Livingstone, 1971, pp. 107-37.

⁶Saiki's 1926 book, *The Progress of the Science of Nutrition in Japan*, well displayed the type of work which interested nutritionists at the HOLN. Among the chapter titles are: 'The basal metabolism of common labourers', 'The biological value of the nitrogenous substances found in our main vegetable foods', and 'Vitamin content of Japanese food materials'. These titles point clearly to the already super-scientific state of nutrition in the industrialized world. The community problems or public health problems which might very well have been placed in the realm of the nutritionists, were taken out, sequestered, and left to activists and a few pioneering nutritionists to publicize. T. Saiki (ed), *Progress Of The Science Of Nutrition In Japan*, Geneva, League of Nations, 1926.

⁷Ibid., p. 5.

By the early-1920s, groundbreaking scientific work in vitamins had led researchers to view several infectious diseases, and good health itself, in nutritional terms. In 1921 Robert McCarrison wrote of a holistic view of health which considered nutrition central. According to McCarrison, "many of the infectious scourges to which human beings are subject - such, for example, as infantile diarrhoea and tuberculosis" require both analyses of the pathogenic organism as well as the dietary state of the sufferer.⁸ For him, diet was as much a determinant for disease as the pathogens themselves, and the doctor of the 1920s onward would have to be nutritionally knowledgeable in order to be effective. Thus the medical practitioner had summary prescriptions for nutrition in the household which the affluent public seemed to digest rather easily. It was widely accepted as kitchen science that infant growth "both in stature and in wisdom was directly related to their food."⁹ Beyond such a basic premise, there was a tacit understanding in the medical community that this new science was uncovering how "the lack of particular constituents in the diet could interfere with normal growth".¹⁰ As far as many scientists were concerned, this comparatively "new" development in science -- linked tightly to vitamin research -- had been singularly the product of twentieth century research.

Politics

During the 1930s England was the epicentre of a nutritional movement which anticipated debates to be heard in the developing world two decades later. Among organizations active in England, The Committee Against Malnutrition and the Children's Minimum Council espoused an ideology implicating poverty -- essentially economic inadequacies -- as the root cause of poor diets and malnutrition. Initially the British government and conservatives vehemently responded that ignorance, exacerbated by educational and moral deficiencies, was the true cause.¹¹ These contrasting views translated into diametrically opposed methods for nutritional

⁸R. McCarrison, *Studies In Deficiency Disease*, 1st ed, London, Henry Frowde And Hodder & Stoughton, 1921, p. 4.

⁹J. A. Nixon, 'The Influence of Food on the Production and Prevention of Disease', *The Bristol Medico-Chirurgical Journal*, 1930, XLVII(178), pp. 256-86.

¹⁰*Ibid.*

¹¹David Smith, 'The Food Leaders Scheme, 1942-52', in Elaine M. Prisk (ed), *The Urban Context. Proceedings of the XII International Home Economics and Consumer Studies Research Conference*, 1, Liverpool, John Moores University, 16-19, 1992. See also: D. Smith and M. Nicolson, 'Nutrition, education, ignorance and income: a twentieth-century debate,' in H. Kamminga & A. Cunningham (eds), *The Science And Culture Of Nutrition, 1840-1940*, Amsterdam and Atlanta, Editions Rodopi B. V., 1995, 288-318.

improvement during the 1930s: one side lobbied for economic progress frequently without an eye toward nutritional education, while the other pushed solely for education.¹² This very public debate moved to an international level after W.W.II as a number of individuals who participated provided leadership in the international health organizations founded during and after W.W.II.¹³

John Boyd Orr, a Scottish nutritionist, was one of the most influential players in nutritional issues in Britain, and later, in the world. Born in 1880, Orr passed through his adolescence and early adulthood witnessing evidence of malnutrition in the children and adults of urban Glasgow.¹⁴ His first-hand observation of poverty impressed him and planted the seeds of his later nutritional advocacy. Orr came to direct the Rowett Research Institute in Aberdeen which, in 1927, he guided into human nutritional studies on the nutritional value of cow's milk.¹⁵ *Through his boisterous and often controversial efforts,* he made a public name for himself by demonstrating that free milk could significantly improve the health of school children, particularly of those from poor families. As a result of their work and fervent advocacy, in 1931 the House of Commons authorized Scotland to improve childhood health by providing inexpensive or free milk to all school children.¹⁶ By 1936, when Orr's seminal tome, *Food Health and Income*, went to press, he had become an effectual and respected figure in the British public eye.¹⁷ Rallied by Orr's assertions that nearly one third of British people did not have sufficient income to support an adequate diet, the book quickly went on to be one of the most innovative and influential pieces on nutrition before W.W.II.¹⁸ *Food Health and Income* was the first detailed scientific report to show the magnitude of the poor state of nutrition in Britain.¹⁹ It broke new ground for the interaction of nutritional science and policy by illuminating a direct relationship between its title's three elements. Orr's resulting proposal suggested that development must rely on a number of factors such as

¹²Ibid.

¹³Smith has comprehensively illustrated the interactions of nutritional science and policy between the wars as well as the roles of significant British nutritionists. See: David Smith, 'Nutrition science and the two world wars', in David Smith (ed), *Nutrition in Britain*, London and New York, Routledge, in press, pp. 143-66.

¹⁴John Boyd Orr Baron Boyd Orr of Brechin Mearns', in *Biographical Memoirs of Fellows of the Royal Society*, London, The Royal Society, 1972, 18, 43-81, pp. 45-6.

¹⁵Ibid., p. 58.

¹⁶J. B. Orr, *As I Recall*, London, Macgibbon and Kee, 1966, pp. 114-15.

¹⁷J. B. Orr, *Food health and income: report on a survey of adequacy of diet in relation to income*, London, Macmillan and Co. Limited, 1936.

¹⁸Orr, op. cit., note 14 above, p. 60.

¹⁹Orr, op. cit., note 16 above, p. 17.

improved socio-economic status and other factors previously dismissed as irrelevant to improvements in health and nutritional status.

Orr's work formed the crest of an information wave containing an abundance of new data on the nutritional condition of people in the world. His work rapidly inspired dozens of countries to undertake similar research. One of Orr's peers, Edward Mellanby, also became a leading political figure in nutrition, though his scientific work was more intricate and superficially less pragmatic. Nevertheless, Mellanby was the consummate scientist-politician, perpetually weaving advances in nutrition into a political framework for the evolution of sensible nutritional policy. Like Orr, Mellanby's initial work was domestic in scope. Whereas Orr's work was very much socio-economic, Mellanby's was astutely scientific. While secretary of the Medical Research Council (MRC), Mellanby rhetorically avoided generalizations and consistently acknowledged the gaps of knowledge in nutritional science. Although he stated in 1934 that, according to current diagnostic techniques, a large proportion of British people suffered from malnutrition, he nevertheless declared that lapses in nutritional knowledge and diagnosis placed the nation "at an impasse on this problem of malnutrition."²⁰ Mellanby believed that the flood of recent nutritional research had not rendered the formulation of nutritional policy in Britain any easier.²¹ Central to the gap in nutritional understanding, wrote Mellanby, was a lack of nutritional data which could formulate standards for adequate nutrition.²²

The Health Organisation of the League of Nations

Mellanby's call, along with the inspired message from Orr and others of the need for improved nutritional policy, rang loudly in the halls of the recently formed HOLN, which published the first internationally-sanctioned and approved dietary requirements in 1935.²³ W. R. Aykroyd, later the director of FAO's Nutrition

²⁰Edward Mellanby, *Nutrition and Disease*, 1st ed, London, Oliver & Boyd, 1934, pp. 74-5.

²¹Mellanby reflected on the weakness of the current scientific position: "We know too much to take the older views as to the criteria of malnutrition seriously, [views correlating height and weight to malnutrition] and we know too little to lay down specific rules as to what criteria should be used according to recent knowledge." Ibid., p. 75.

²²Ibid.

²³Weindling, 'The Role of International Organizations in Setting Nutritional Standards in the 1920s and 1930s', op. cit., note 3 above, p. 325. Mellanby's influence on the HOLN increased in 1933 when he assumed his post at the MRC. The HOLN was founded in 1923 and was stationed in Geneva. In its original stated objectives, nutrition did not figure into the organisation's *raison d'être*. By 1926 the HOLN had worked primarily on epidemic diseases throughout Europe and had comparatively little if any experience in Latin America, Asia, or Africa. No programmes to date had targeted nutritional

Division, commented in 1946 that "Actually nutrition made its first appearance in the international sphere at the Assembly of the League of Nations in 1935".²⁴ The HOLN had an extremely limited nutritional programme which focused on nutritional standards and on the socio-economic determinants of good health. Under the dynamic leadership of Ludwik Rajchman, the HOLN's nutrition programme expanded through the 1930s with thirty-nine nutritionally-related publications in 1936 alone, up from a total of twelve for 1924-1931.²⁵

Perhaps more important than its publications, the HOLN brought more British scientists into the international nutritional policy fold, including Aykroyd, then the Director of the Nutrition Research Laboratories in Coonoor, India, whom Rajchman hired to formulate an international nutritional policy.²⁶ The innovative and unusual nature of the HOLN -- an impressively autonomous international health organization sanctioned by more countries than any previous attempt -- served well to mould and be moulded by great nutritionists who would come to dominate the international field.²⁷ The nutrition work of the HOLN, which was primarily conducted in British research institutions, buttressed and expanded the shocking findings of prevalent

concerns. See: *Handbook of International Organisations*, Geneva, League of Nations, XII B.1, 1927, pp. 17-18. Due to the influence of F. L. MacDougall, a friend of Orr's and advisor to High Commissioner for Australia in London, Orr served on the committee which produced these standards in 1935. 'John Boyd Orr Baron Boyd Orr of Brechin Mearns', op. cit., note 14 above, p. 60.

²⁴Wallace R. Aykroyd, 'Nutrition and poverty - a brief world survey', October 1946, FAO Archives, 57.1D1, p. 1.

²⁵Weindling, 'The Role of International Organizations in Setting Nutritional Standards in the 1920s and 1930s', op. cit., note 3 above, pp. 321-23. Weindling reported that Rajchman's interest in nutrition dated to his work with Funk at the Warsaw Institute of Hygiene. This association along with others suggest that the networks of nutritionists and scientists interested in nutrition were remarkably small and well-connected. Rajchman is today increasingly recognized as having been one of the world's great international health advocates. For a comprehensive biography see: Marta Aleksandra Balinska, *Une Vie pour L'humanitaire: Ludwik Rajchman (1881-1965)*, Paris, Editions la Découverte, 1995. Although the HOLN claimed in 1935 that it had considered "the question of the best possible feeding of the greatest number" for ten years, an examination of publications and committees suggests, to the contrary, that such questions were not thoroughly examined before the 1930s. See: *Nutrition Considered in Relation to Public Health And to Economic Conditions*, Geneva, Information Section, The League of Nations, 1935, p. 5.

²⁶Anne Hardy, 'Beriberi, Vitamin B1 and World Food Policy, 1925-1970', *Medical History*, 1995, 39, 61-77, on p. 65. See also: 'Report on the work of the health organisation between June 1938 and April 1939 and on its 1939 programme', *Bulletin of the Health Organisation*, 1939, VIII(1-2), 1-86, on p. 28.

²⁷For explanations of the special autonomy the HOLN enjoyed due to its leadership and close ties to the Rockefeller foundation, see Paul Weindling, 'Social medicine at the League of Nations Health Organisation and the International Labour Office compared', pp. 134-53, and Martin David Dubin, 'The League of Nations Health Organization', pp. 56-80, in Paul Weindling, (ed), *International Health Organisations And Movements 1918-1939*, Cambridge, Cambridge University Press, 1995.

malnutrition in the industrialized countries, though fell far short of reinforcing sparse work on the topic in the developing world.²⁸

During the mid-1930s, the HOLN initiated international nutritional studies -- the first of their kind.

In 1935 it published *Nutrition Considered In Relation To Public Health and to Economic Conditions*.²⁹ This vague rhetorical committee report called for a broad policy of nutritional improvement to be heralded by economic improvements, nutritional education, and increased food supplies. It well reflected the clashing currents fuelled by those who saw malnutrition as a problem of ignorance, and by those who saw it as problem of economics.³⁰ The report also highlighted the important, though frequently subservient, role of women in shaping future nutritional concerns around women and children. One prominent female member of the committee called for an emphasis on the nutritional needs of infants and pregnant and lactating mothers. In spite of her pleas, the committee frigidly stated that "nutrition in infancy, childhood and adolescence must be planned...In the case of adults, these [nutritional] needs will have to be considered in connection with age, sex, and the nature of employment."³¹ Thus, far from making the nutrition of mothers and children a research priority, as future committees would do, this committee broadly stipulated the need for universal nutritional requirements.

In 1936, the HOLN technical committee published 'Report on the physiological basis of nutrition' which coincided with the publication of *The Problem of Nutrition*.³² These documents pointed to the emergence of nutrition as far more than a domestic issue of concern and began to frame the problem of nutrition as one involving colonial powers in the developing world. They expanded the conceptualization of nutrition issues from the domestic and internationally unilateral realm to the developing multinational stage. In the countries seated on this stage -- Union of South Africa, Belgium, Bulgaria, Czechoslovakia, Finland, France, Hungary, Britain, and Italy

²⁸*The Problem of Nutrition*, Geneva, League of Nations, 1936. See also: Weindling, 'The Role of International Organizations in Setting Nutritional Standards in the 1920s and 1930s', op. cit., note 3 above, p. 322. The heart of scientific research for the HOLN could be found at the British Medical Research Council (MRC) which, in 1933, began strongly positive relations with the HOLN.

²⁹*Nutrition Considered in Relation to Public Health and to Economic Conditions*, op. cit., note 25 above.

³⁰*Ibid.*, on pp. 7, 10-11, 16. It seems that most HOLN nutrition committee members shared Orr's sentiment that the price of food had to be brought down to the reach of the lower classes. A few, most prominently the French, emphasized that ignorance as well as poverty was at the root of malnutrition among the poor as well as the rich. (p. 16)

³¹*Ibid.*, pp. 17-18.

³²'Report on the physiological bases of nutrition', *Quarterly Bulletin of the Health Organisation*, 1936, V(3), pp. 391-415; and *The Problem of Nutrition*, op. cit., note 28 above.

among them -- it was observed that there were two central hunger problems: 1)the poor could not afford to purchase adequate food and 2)the poor as well as the upper class were ignorant of nutritional science.³³

The committees working on nutrition for the HOLN demanded a wide range of information -- from global production of milk products to the nutritional results of bottling fruit.³⁴ The list of problems requiring further study published in 1936 included the following:

The assessment of the nutritional state of children; Nutritive food requirements during the first year of life; Minimum vitamin and mineral requirements; Minimum fat requirements; The nutritive and 'supplementary' values of the different protein-containing foods, to determine to what extent and in what forms animal protein is necessary for growth and health; and the relative nutritive value of different cereals according to the degree of milling.³⁵

This veritable wish list for research reflects how little scientists knew about what people ate, how much food was supplied, what was nutritionally required, and how broadly they were conceptualizing nutritional problems. In spite of their admitted ignorance, in September 1936 the HOLN Technical Commission on Nutrition mustered consensus on average values for basic dietary requirements, including calories and protein, and published them in 'The physiological bases of nutrition'.³⁶ Ironically, the same issue of *The Quarterly Bulletin of the Health Organisation* containing this report also contained a fascinating report which questioned protein obsession. Under the misleading title 'The protein component in the human diet', the author, Professor Terroine from Paris, stated on the subject of protein:

There is no need to include proteins of animal origin in the diet of man, whatever the stage of life considered and whatever the nature of the needs to be satisfied...The prejudice in favour of meat and the luxurious habits which are constantly increasing the consumption of this food are as absurd physiologically as they are economically.³⁷

³³Ibid.

³⁴Ibid., pp. 270-71.

³⁵*Survey of National Nutrition Policies*, C.478.M.321.1938.II.A, Geneva, League of Nations, 1938, pp. 7-8.

³⁶'Report on the physiological bases of nutrition', op. cit., note 32 above.

³⁷Émile F. Terroine, 'The Protein Component in the Human Diet', *Quarterly Bulletin of the Health Organisation*, 1936, V(3), 427-92, on pp. 490-91.

He further commented importantly that

It is a fact that nearly always 'if you take care of the calories, the protein will take care of itself'. The first predominant consideration would be to provide all populations, all classes of society, young and old, with the quantity of food which is necessary to meet energy requirements of all kinds; once this has been done, it will rarely be found that all other needs have not been simultaneously satisfied, especially if a mixed diet is used. The main purpose of public health policy in the field of nutrition must be to eliminate under-feeding; thereafter, very little will need to be done to prevent malnutrition. (emphasis his)³⁸

Terroine went on to ridicule the idea of a gold dietary standard and upheld a standard peasant diet as being perfectly sufficient and supportable under new scientific knowledge.³⁹ This study was a landmark in the spotty history of protein obsession. While other studies and recommendations were already dwelling on low protein intakes, particularly from animal sources, Terroine was advocating a holistic nutritional view.

Capacious nutritional views were hardly *à la mode* in the 1930s as committee members were only slowly coming to a broader understanding of international nutritional concerns and were focusing on dietary minutiae. After citing overwhelming statistics on poverty and malnutrition in the United States and Britain, one report rhetorically questioned, "If this is the case in these relatively advanced countries, what is the position elsewhere?"⁴⁰ The groundwork had not yet been initiated, but there was a tacit recognition that hunger and malnutrition in developing countries were abominable problems. Nutrition, according to the League of Nations, was a concern for all humanity, in much the naive vein peace had been following W.W.I. The breadth of nutritional concern in the "advanced countries" scarcely lay outside of their territorial borders, and certainly not outside of their colonies.⁴¹

³⁸Ibid., p. 491. Australian Stanley Bruce, in a famous address to the Assembly of the League of Nations, summed up contemporary thinking on protein and calories. He said, "The discovery of the vitamin, the realisation of the profound significance of mineral salts and of the need for high-quality proteins has brought us to the point where we know that **calories are not enough.**" (emphasis mine) Stanley Bruce, 11 September 1935, in *The McDougall Memoranda – Some Documents Relating to the Origins of FAO and the Contribution Made by Frank L. McDougall* FAO., 1956, p. 21.

³⁹Terroine, op. cit., note 37 above, p. 492.

⁴⁰*Nutrition Considered in Relation to Public Health And to Economic Conditions*, op. cit., note 25 above, p. 9.

⁴¹The League acknowledged the probable prevalence of malnutrition in the colonies in 1935. By 1938, Britain alone had conducted peripheral surveys or studies in Nigeria, Malta, Northern

Momentum in the League of Nations early in 1936 had led twelve nations to request a specific branch of the HOLN to deal with questions pertaining to nutrition. The response was the establishment of a mixed committee on nutrition. This committee produced the most conclusive statement by the HOLN on the nutrition issue in 1937's *Nutrition – Final Report of the Mixed Committee of the League of Nations on The Relation of Nutrition To Health, Agriculture and Economic Policy*, written by such nutritional luminaries as Frederick McDougall, Mellanby, McCollum, Van Rijn, and Viscount Astor. The document elaborated on the process by which the world economic depression along with the Burnet-Aykroyd report of 1935, 'Nutrition and Public Health', and the 'Report on the Physiological Bases of Nutrition' of 1936, had prompted the HOLN to make nutritional policy recommendations to member governments. The committee hailed the Burnet-Aykroyd report as the critical document depicting nutrition as "no longer an exclusively physiological problem and...henceforward...[as] a matter of concern to both public health officers and economists."⁴² The Mixed Committee report well summed up the state of nutritional knowledge and ideology in 1937. It described in detail "how nutrition has played its part in the present stage of human progress in countries of Western civilisation" and then optimistically proclaimed that "the application of the 'Newer Knowledge' [of nutrition] has only just begun. If the hope which nutrition holds out can be transformed into a reality, entirely new perspectives will be opened up for the improvement of human welfare."⁴³ Of primary political importance, the commission asserted that national nutritional policies had to be established with the input and leadership of governments and that such policies would have to be based on food consumption surveys.⁴⁴ The report repeatedly cited milk provided through national policies as the primary means for improving the health of populations, particularly for mothers, infants, and children.⁴⁵ Although the committee lamented the presupposition that colonial populations were malnourished, it sheepishly had little more to say about

Rhodesia, Trinidad, Tobago, Uganda, Zanzibar, Dominica, Barbados, Ceylon, Jamaica and elsewhere. *Survey of National Nutrition Policies*, op. cit., note 35 above, p. 119. See: E. Burnet and W. R. Aykroyd, 'Nutrition and public health', *Quarterly Bulletin of the Health Organisation of the League of Nations*, 1935, IV(June), pp. 1-140. See also: M. Worboys, op. cit., note 4 above, p. 214.

⁴²*Nutrition – Final Report of the Mixed Committee of the League of Nations on The Relation of Nutrition To Health, Agriculture and Economic Policy*, Geneva, League of Nations, 1937, p. 12. The report, however, self-avowedly fell short of examining the interaction of economics and nutrition. (p. 54)

⁴³*Ibid.*, p. 31.

⁴⁴*Ibid.*, p. 16.

⁴⁵*Ibid.*, p. 19.

hunger in the developing countries. Out of the three-hundred pages of the report, six pages dealt directly with the evidence for malnutrition in the colonial areas and Asia, and the remaining pages of the report directed attention to governments in the industrialized nations.⁴⁶ Preliminary findings suggested that protein intake in the tropics and the East were unacceptably low, while in Africa animal fat intake was depressed.⁴⁷ The committee stated that it had been "obliged" to exclude Asia and tropical countries from the study due to a decisive lack of information. Nevertheless, the committee members agreed that most peoples inhabiting that part of the globe were overwhelmingly undernourished. Although the information was scarce, the committee members reiterated that malnutrition in the world was "at once a challenge and an opportunity: a challenge to men's consciences and an opportunity to eradicate a social evil by methods designed to increase economic prosperity."⁴⁸

By 1938 the HOLN had aided in the organization of National Nutrition Committees in twenty-one countries (including underdeveloped India, Egypt, and Iraq) whose responsibilities included collection of information about nutritional problems, analysis, promotion of further investigations, and recommendation of national dietary changes. The enquiries which had been made by these committees up to 1938 were self-proclaimed to be "largely of a preliminary and tentative character".⁴⁹ In its 1938-1939 annual report, the HOLN readily admitted that in spite of its nutritional endeavours, there was a dearth of nutritional knowledge:

there is a lack of exact information on the conditions governing the diet of populations, particularly those in rural areas. Doubtless it is already clear that the state of nutrition is often defective; yet precise data as to the extent and real gravity of undernutrition are lacking in the great majority of countries, and there is accordingly little information available regarding the nature of the dietary deficiencies.⁵⁰

⁴⁶The authors apologetically explained that data were unavailable for the Far East and other developing areas. Furthermore, they stated that "The information at present available regarding the diet of native populations of colonial areas is not sufficient to form the basis of a comprehensive picture." Ibid., p. 320.

⁴⁷Ibid., pp. 321-22. This reference to animal fat clashed with Terroine's earlier assertion that animal proteins (and fats) were unnecessary.

⁴⁸*Nutrition: Report submitted by the Second Committee to the Assembly*, Geneva, document A.57.1937.II.B, 28 September 1937, 1-3, on p. 3.

⁴⁹*Survey of National Nutrition Policies*, op. cit., note 35 above, p. 13.

⁵⁰'Report on the work of the health organisation between June 1938 and April 1939 and on its 1939 programme', op. cit., note 26 above, p. 26.

In response to the hunger for more detailed nutritional findings, the HOLN was gearing up for international nutrition surveys.⁵¹ In March 1939, the year of the last meeting of the HOLN Health Committee,⁵² the HOLN published a monograph which directed countries and HOLN nutrition committees to conduct standardized nutritional surveys.⁵³ By the time HOLN members met to implement the report's recommendations, the war had escalated and the work of the organization had been truncated.⁵⁴ With the thunder of W.W.II as a backdrop, these surveys would have to wait.

Nutritional Science in the Developing World before the War

While the 1930s and early-1940s had seen isolated examples of scientists working on an array of nutritional problems in the developing world, such research was generally disconnected and not well-publicized. Furthermore, *in contrast to other scientific disciplines* many people who worked in the nutritional sciences were women, and it has been suggested that their work "feminized" the science and obscured it from the scientific spotlight.⁵⁵ *One woman doctor who made a profound impact on nutrition* was Cicely D. Williams, who made her revolutionary identification of kwashiorkor in 1933 while working on the Gold Coast.⁵⁶ Williams brilliantly linked the onset of kwashiorkor to inadequate protein consumption often induced by poor breastfeeding.⁵⁷ Her illuminating work stood alone for more than a decade in a world where few scientists and doctors studied nutritional problems in the developing world, and still fewer, perhaps, heeded the findings of a woman.

Prior to 1945, the vast majority of British medical people who conducted research in the developing world were enlisted by the Colonial Office, as Williams had

⁵¹Ibid., pp. 27-32.

⁵²N. M. Goodman, op. cit., note 5 above, p. 136.

⁵³E. J. Bigwood, *Guiding Principles for Studies on the Nutrition of Populations*, Geneva, League of Nations, no. C.H. 1401, 1939.

⁵⁴John Boyd Orr Baron Boyd Orr of Brechin Mearns', op. cit., note 14 above, p. 60.

⁵⁵Rima D. Apple, 'Science gendered: nutrition in the United States, 1840-1940', in H. Kamminga and A. Cunningham (eds), *The Science And Culture Of Nutrition, 1840-1940*, Amsterdam and Atlanta, Editions Rodopi B. V., 1995, 129-54, on p. 147. Apple noted that one-hundred percent of nutritionists in 1921 were women whereas their proportion had fallen to forty-two percent by 1938. (p. 153)

⁵⁶Williams was, however, a paediatrician, not a nutritionist, by training. Many of her papers are held at the Contemporary Medical Archives Centre (CMAC) at the Wellcome Institute for the History of Medicine, London. Unfortunately, the documents shed very little light on her international nutritional involvement.

⁵⁷Cicely D. Williams, 'A Nutritional Disease of Childhood Associated with a Maize Diet', *Archives of Disease in Childhood*, 1933, 8, 423-33.

been. The involvement of the U.S. was considerably less as such work was shunned by many as academically unacceptable.⁵⁸ It was not until the late-1940s and early-1950s that nutritional science in the developing world developed a tangible foundation. The only individuals who could truly begin to grasp the breadth of the nutritional problems in the developing world were usually those in the field, and their voices were among the weakest in the international medical community. Their patients were not the same patients being seen in the wards of Columbia-Presbyterian Hospital in New York or Bart's in London. The patients in the field on the Ivory Coast, the Far East, and the West Indies were interesting cases from another world, suffering from exotic problems generally unseen in the wealthy nations. Although some doctors in the developing countries published articles in internationally renowned peer review journals about indigenous nutritional problems, their reports were scattered and sparked interest in only a few avant-garde physicians, researchers and members of the British and Dutch Colonial Services.

In 1939 Mellanby suggested that colonial territories could expect to experience a drop in mortality rates and improvement in general health which would be commensurate with improvements in their food supply.⁵⁹ Thus malnutrition to Mellanby was not precisely a disease, but rather the result of a shortage of essential foods. His perspective sounded *and, like many of his peers,* *§ 2: (a) to Orr's,* his paternalistic attitude toward natives was unmistakable. Mellanby stated that "There are great troubles ahead and many people would feel happier about the future of native races if more men with scientific training and outlook, especially on the biological side, held the important administrative posts in colonial countries." He went on to take up the proverbial white man's burden: "Having put our hand to the plough [in tropical countries]...there can be no turning back, and we can only pray that there is sufficient wisdom left among us to use the fruits of science properly."⁶⁰ Mellanby's nutritional ideology contrasted sharply with others since he believed that colonial problems were primarily biological and that nutritional science was the key to solving them.

⁵⁸Nevin S. Scrimshaw, interview, 25 July 1995.

⁵⁹E. Mellanby, *Recent Advances in Medical Science A Study of their Social and Economic Implications*, Cambridge, Cambridge University Press, 1939, p. 58.

⁶⁰*Ibid.*, p. 59.

International Hunger Fighting

The conscious fight against malnutrition in the developing world cannot be clearly traced until after the formation of international organizations committed to addressing this problem. The relevant UN agencies appear to have had their aegis in the formation of the IIA as well as in the work of the HOLN in the late-1930s. As early as 1935 the HOLN foresaw the need for massive international agencies. At that time the League declared,

A state of things has been observed in certain countries that no doubt exists in all: the diet of a more or less large section of the population is below what physiologists regard as the ideal standard. Money spent on raising this to the desirable level would improve both public health and the position of agriculture. Who can doubt that such a policy, if judiciously applied, would be of benefit to the country that applied it? Can it be applied to the world as a whole? The difficulties which undoubtedly exist will grow less as international institutions develop.⁶¹

As nutritional science came in vogue during the late 1930s, there was increased recognition on the part of a few prescient thinkers like Orr, that this field would eventually interact heavily with economics and agriculture. After pointing out that all but the poorest people could afford staple foods such as wheat and sugar, he advanced the issue by noting that

the advance in the science of nutrition has forced us to accept a new standard of food requirements which is much higher than merely satisfying hunger...According to this new standard there is a shortage of many foodstuffs which are of importance for health, and the cost of the kind of diet now recognized to be needed for health is admitted to be, even in the wealthiest countries, beyond the purchasing power of a large proportion of the population.⁶²

Orr wrote these words in the book *What Science Stands For* and targeted the public as his audience. Through similar public tracts and appearances Orr made the case for the importance of nutrition even in wealthier, healthier Britain.

⁶¹*Nutrition Considered in Relation to Public Health And to Economic Conditions*, op. cit., note 25 above, p. 11.

⁶²J. B. Orr, 'Nutritional science and state planning', in *What Science Stands For*, London, George Allen & Unwin LTD, 1937, 11-29, on p. 12.

In Orr's view, hunger, or undernutrition, had been vanquished as the primary scourge and replaced with less pressing, but nevertheless harmful, malnutrition.⁶³ His views carried considerable weight and influence far beyond the borders of his homeland.⁶⁴ For Orr, government involvement was a necessary component of nutritional policy and could best be addressed through agricultural policies:

The growing demand to get the new science of nutrition applied for the improvement of the health and physique of the nation calls for a reconsideration of the Government agricultural policy...a State agricultural policy must form part of a national food policy, the basis of which must be the provision of a diet adequate for health for every member of the community.⁶⁵

This ideology, first explicated during the mid-1930s, years later would form the foundation of Orr's notions on global food policies.

Orr's rhetoric reflected his confidence in the new science of nutrition and the need for its dissemination: "until quite recently medical education in practical dietetics was almost wholly limited to what could be expressed in terms of calories and proteins, and assumptions based on their technical training still linger in the minds of some medical men."⁶⁶ He continued: "[this old idea of dietary requirements is] also held by many economists and politicians, who do not realize the extent to which our knowledge of food requirements has increased in the last twenty years."⁶⁷ Orr frequently harped on how the new science of nutrition could have tangible health benefits on previously "acceptable" levels of disease. He wrote, "Children with what are unfortunately regarded as minor defects, such as slight rickets, a slight degree of nutritional anaemia, and carious teeth, might ... be regarded as normal. Although they can run about and attend school, children with these defects are, in fact, suffering from malnutrition due to faulty diet."⁶⁸ Orr thereby shifted the discourse on health and sickness: what had been considered acceptable and healthy was now unacceptable and morbid. Echoing the voice of the British nutrition movement, Orr called for an ideal

⁶³In this case, Orr employed the term hunger to be synonymous with starvation.

⁶⁴David Lubbock noted Orr's relations to nutritionally-interested politicians in the international community. See, for example: David Lubbock, 'Origins and early development of FAO', in D. P. Cuthbertson (ed), *Progress in Nutrition and Allied Sciences*, Edinburgh and London, Oliver & Boyd, 1963, pp. 23-30.

⁶⁵Orr, op. cit., note 62 above, pp. 12-13.

⁶⁶Ibid., p. 14.

⁶⁷Ibid.

⁶⁸Ibid., pp. 16-17.

nutritional standard which, if unachievable for all people, should in his view at least be consummated for mothers and children "for the sake of the future of the race".⁶⁹ In conclusion, Orr affirmed that a national food policy which provided the malnourished part of the population, which he estimated to be half of the total population, with adequate nutrition "would constitute the greatest social reform of our age."⁷⁰

According to Viscount Astor, Chairman of the League of Nations Commission on Nutrition and Agriculture for two years, there was not sufficient enthusiasm for plans like Orr's. At a conference in 1939, Astor remarked:

The public do [sic] not yet realize either the importance of nutrition or the damage caused by malnutrition...the same is true in large measure even of the medical profession....The connection between agriculture and nutrition is obvious. What has not yet been realized is the difficulty in having an adequate nutrition policy and a properly nourished population unless we re-orientate and alter our present agricultural policy.⁷¹

For the time being, the relationship between agriculture and nutrition remained the centrepiece for idealistic discussion of international nutrition problems.

Nutritional Issues during the War

Although W.W.II swiftly brought the emerging, idealistic international work of the HOLN to a halt, it inspired relevant domestic nutritional studies which had previously been desired. If there were any motivating force in moving the status of nutrition to the fore on national agendas, it was the war, and the place most nutrition-minded was England. There, the issue of nutritional requirements arrived on every citizen's doorstep and kitchen table as the government embarked on its rationing programme.⁷² Among other projects, the Food Leaders Scheme, initiated in April

⁶⁹Ibid., p. 18.

⁷⁰Ibid., p. 29.

⁷¹Viscount Astor, comment in *Nutrition and the Public Health, Proceedings of a National Conference on the Wider Aspects of Nutrition*, 1939, London, British Medical Association, p. 38.

⁷²In the US, nutritional concerns were less profound than they were in Britain. This stems in part from a historic abundance of "protective" foods in the United States and a concomitantly low level of nutritional deficiency diseases. In 1943 a prominent American nutritionist stated that "Our greatest nutritional handicap in the United States is not that part of our population which is starving in the historic sense, nor that part which is recognized as suffering from specific nutritional deficiency diseases, but the part (probably much larger than those other two parts put together) which is 'getting along on poor diets.'" H. C. Sherman, *The Science of Nutrition*, New York, Columbia University Press, 1943, pp. 118-19.

1942, sought to educate women on purchasing and preparing the most nutritious foods.⁷³ This focus on education and survival under rationing produced an unusual interplay between science and practicality. While nutritionists worked feverishly to determine the composition and importance of foods, it was seen as being equally important that this information be disseminated and followed quickly. After all, nutrition, it seemed, could cure all social ills. In America, improved nutrition had even been credited as "a major factor in the unquestionable finding that boys and girls now enter college both younger and taller than formerly."⁷⁴

Orr was a leading figure in wartime nutritional policy and aptly noted in 1940 that due to the war, the international nutrition movement "was likely to be retarded".⁷⁵ However, Orr, in his characteristically brilliant rhetoric, pointed out that nutrition would be crucial to the success of Britain in the war. Thus, he wrote, "It is as important to apply all our scientific knowledge to the improvement of the nation's stamina and powers of resistance [through improved nutrition] as to apply our scientific knowledge to the improvement of weapons of war."⁷⁶ Many others joined in this view, not the least of whom was the British government.

Besides the British focus on rationing, the U.S. and Britain sought to determine the ideal nutritional requirements of a soldier in the field. As troop numbers increased, civilians had increasing types of food rationed based on previously culled nutritional knowledge. In the nutritional laboratories which had been fuelling developments in the study of nutrition, research efforts were stymied as staff joined the war effort and scientists set their sights on military and civilian health targets under the spectre of war.⁷⁷ The intensive studies which nutritionists had been called on to conduct by the HOLN did not continue, even in a military capacity.

Before the U.S. had even entered the war, a report by the internationally-influential National Research Council (NRC) in Washington assured the government and public that the U.S. could produce adequate protein to feed an army of seven million and a civilian population of one hundred and thirty-nine million.⁷⁸ The data,

⁷³David Smith, 'The Food Leaders Scheme, 1942-52', in Elaine M. Prisk (ed), *The Urban Context. Proceedings of the XII International Home Economics and Consumer Studies Research Conference*, Liverpool, John Moores University, 1, 1992, pp. 16-19.

⁷⁴Sherman, op. cit., note 72 above, p. 143.

⁷⁵J. B. Orr, 'National food requirements', in *The Nation's Larder and the Housewife's Part therein*, London, G. Bell and Sons, LTD, 1940, 46-64, on p. 56.

⁷⁶Ibid., pp. 58-9.

⁷⁷At Orr's Rowett Research Institute, for example, the whole research programme was put on hold until after the war. 'John Boyd Orr Baron Boyd Orr of Brechin Mearns', op. cit., note 14 above, p. 62.

⁷⁸W. C. Rose, D. B. Jones, W. J. Morse, and R. C. Pollock, *The Nation's Protein Supply*, Washington, D.C., Food and Nutrition Board of the National Research Council, 1942, pp. 6-8. British Ministry of

however, were based on exceptionally inconclusive studies. Thus the council made protein estimates for individual soldiers which varied from 73 grams to an admittedly "improbable" 150 grams. The council assuaged government fears and stated categorically that "the American people are in no immediate danger of experiencing a deficiency in the protein supply." Nevertheless, the council cautioned that "should this country be called upon to export a very considerable proportion of its high-protein foods, a protein shortage might occur unless in the meantime appropriate measures are taken to prevent it." The "appropriate measures" included an optimistic net production increase, to be provided to the allies, of "1 billion pounds of beef, 1 billion pounds of pork, 1 billion dozen eggs, 500 million pounds of dry whole milk, and 500 million pounds of dry beans".⁷⁹ The commission foresaw a possible protein crisis occurring at the end of the war. This was one of the earliest examples of fear over a possible international protein deficit and served to further impel nutritionists to concentrate on protein rather than other elements of the diet. Additionally, this report and others prompted international leaders to boost the position of food supply on the international agenda.

In October 1942, Frederick L. McDougall, an Australian active in the League of Nations, wrote a memorandum entitled 'Draft memorandum on a United Nations Programme for Freedom from Want of Food'. Largely following a similar memorandum from 1935, McDougall put forth several ideas on how the international community might cope with hunger in the world's population, which he believed to be prevalent. Mirroring Orr's surplus milk concerns, McDougall asserted that chronic malnutrition and hunger in a world with markets burdened by surplus food indicated the need for genuine international co-operation.⁸⁰ In November, Dr. Frank Boudreau, formerly the director of the Health Section of the League of Nations, implored Orr to come to the U.S. for high-level discussion of a World Food Plan. Orr conceded and during his visit spoke with Vice-President Wallace and Under-Secretary of State Dean Acheson.⁸¹ Probably spurred by Orr's visit, Eleanor Roosevelt learned of McDougall's

Health reports frequently cited NRC data, and the NRC 1941 report on food requirements served for years as an international nutritional yardstick. See: *Manual of Nutrition 1945*, London, His Majesty's Stationery Office, 1945, p. 43. See also: Sir John Boyd Orr, *Food And The People*, London, The Pilot Press LTD, 1943, pp. 9, 56; *Final Act of the United Nations Conference on Food and Agriculture*, Miscellaneous no. 4, London, His Majesty's Stationery Office, 1943, p. 7.

⁷⁹Rose et. al., *The Nation's Protein Supply*, op. cit., note 78 above, all quotes on p. 7.

⁸⁰Frederick L. McDougall, 'Draft Memorandum on a United Nations Programme for Freedom from Want of Food,' October 1942, in *The McDougall Memoranda — Some Documents Relating to the Origins of FAO and the Contribution Made by Frank L. McDougall*, Rome, FAO, 1956, pp. 26-38.

⁸¹'John Boyd Orr Baron Boyd Orr of Brechin Mearns', op. cit., note 14 above,, pp. 63-64.

memorandum and then spoke with McDougall. Another meeting, this one with President Roosevelt, followed McDougall's first interaction with the White House.⁸² Although the issue appeared to lose the President's interest, Roosevelt soon called for a United Nations Conference on Food and Agriculture to be held in Hot Springs, Virginia, from 18 May to 3 June 1943.⁸³ The declarations of this meeting with all of their ultra-idealistic rhetoric mimicked Roosevelt's previously declared "Four Freedoms". In particular, the conference declared that freedom from hunger -- "a secure, an adequate, and a suitable supply of food for every man" -- was at the foundation of all other freedoms.⁸⁴ Due to the glaring absence of leading nutritionists such as Orr, discussion of nutrition was minimal.⁸⁵

The conference's official declaration stated that "The first cause of hunger and malnutrition is poverty. It is useless to produce more food unless men and nations provide the markets to absorb it. There must be an expansion of the whole world economy to provide the purchasing power sufficient to maintain an adequate diet for all."⁸⁶ In order to further these lofty goals, the conference established an Interim Commission on Food and Agriculture which would eventually become FAO in 1945. The goals of the Interim Commission included research on "how the body is nourished" and nutritional problems in other parts of the world. Further, the conference rather optimistically entrusted the fledgling and tiny commission to expand world food supplies and distribution.⁸⁷ As the war began its protracted conclusion, it seemed that in comparison to defeating the greatest enemy the industrialized countries had known, eliminating hunger throughout the world would only require the same persistence and scientific understanding that had provided the thrust of the war effort.

⁸²McDougall, op. cit., note 80 above, pp. 26-38. McDougall's early dedication to establishing a food and agricultural organization earned him credit as "the father of FAO". E.J.R. Heyward, interview, 12 September 1995. No history has credited Orr for his role in bringing a World Food Plan to the desk of President Roosevelt.

⁸³Phillips, op. cit., note 2 above, pp. 4-5.

⁸⁴*United Nations Conference on Food and Agriculture, Hot Springs, Virginia, May 18-June 3, 1943*, Washington, D.C., U.S. Government Printing Office, 1943, p. 1.

⁸⁵Orr's radical economic and social philosophy so bothered the British government, that Orr, among the most appropriate politicians for the conference, was excluded. McDougall periodically informed Orr of the progress of the conference. 'John Boyd Orr Baron Boyd Orr of Brechin Mearns', op. cit., note 14 above, p. 64.

⁸⁶*Final Act of the United Nations Conference on Food and Agriculture*, op. cit., note 78 above, p. 16.

⁸⁷*Ibid.*

Colonial Malnutrition During the War

As previously stated, most research into the causes and results of hunger and malnutrition were suspended during W.W.II. However, the report *Nutrition in the Colonial Empire*, along with the lofty goals espoused by the HOLN through 1939, reverberated in the minds of some public-health minded people even during the war. The full report was presented by a nutrition committee which included leading nutritionists such as Orr and Mellanby. Although British nutritionist B. S. Platt was not a member of the committee, he played a substantial role in shaping it.⁸⁸ In the eyes of his peers, *Nutrition in the Colonial Empire* was viewed as Platt's document.⁸⁹

For the nutritionally-inclined, *Nutrition in the Colonial Empire* considerably advanced and influenced ideas about nutrition in developing countries through its description of nutrition in forty-eight territories containing a population in excess of fifty-five million.⁹⁴ The details included, where available, were statistics on birth, infant mortality, and death rates, as well as key aspects of the native diet and nutritional deficiencies. Its frank insights into the clinical and sub-clinical forms of

⁸⁸ W. R. Aykroyd was known to have taken considerable credit for the report for himself. Hardy, op. cit., note 26 above. Platt's interest in surveying and addressing colonial malnutrition problems was notable and led him to spend considerable periods of physically-challenging time in the colonies. Following a "heavy first dose of malaria" while conducting the Nyasaland Survey in present day Malawi, Platt described some of his thoughts in a letter to the Colonial Office. He presented a number of ideas including a handbook of deficiency disease and a "review of advances applicable to colonial conditions." B. S. Platt, 'Letter to Eastwood', in Platt diary, Mbeya, 29 May 1939, LSHTM Archives.

⁸⁹ J. C. Waterlow, interview, 6 June 1995. The full report was presented by a national committee which did not include Platt. However, the committee did credit Platt's major contribution to the project. *Nutrition in the Colonial Empire, First Report-Part- I*, op. cit., note 1 above.

⁹⁰⁻⁹³ no notes (revised)

⁹⁴ *Nutrition in the Colonial Empire, First Report-Part- I*, op. cit., note 1 above, p. 151.

malnutrition were notable in their own right, as well as in their identification of foci for future work. In conclusion, for example, the report stated:

The science of nutrition is still young and little is known of conditions in tropical countries. Of one conclusion, however, we have no doubt and that is the great importance of the subject...At the present time the effects of malnutrition are seen not only in definite disease but also in general ill health and lowered resistance to infection, inefficiency of labour in industry and agriculture, maternal and infantile mortality and a general lack of well being.⁹⁵

Thus, although the committee members acknowledged the shortcomings of research and nutritional knowledge, they were nonetheless able to intuit the vast, deleterious impact of malnutrition on many aspects of life. As for the causes, the report revealed that "the fundamental cause of malnutrition is the low standard of living of many of its inhabitants. Ignorance is a very important factor also...We should add also, as a third main cause, the influence of other diseases which react upon the state of nutrition of the individual."⁹⁶ These three main areas -- socio-economic status, ignorance, and the interactions of nutrition and infection -- would be among the leitmotifs of future nutrition policy-making and research.

Due to its compelling illustration of the widespread nature of malnutrition, *Nutrition in the Colonial Empire* inspired considerable interest in colonial nutrition problems. By 1944, a movement for nutritional work in the colonies had come to the fore. In a report to the Fabian Colonial Bureau, a group of scientists called for a rather untimely charge against malnutrition in the colonies. In this group's opinion, there was a "formidable accumulation of evidence" that reflected the lowly state of health in the Colonies, especially in African territories. They resolutely highlighted the singular importance of programmes attacking malnutrition over all other public health projects. In fact, they went so far as to assert that while health was multi-faceted, malnutrition deserved a pedestal above infectious diseases, insect-borne disease, and medical service improvement.⁹⁷ G. M. Culwick and A. T. Culwick, two notable British anthropologists, conducted an impressive array of studies in present day Tanzania during the late-1930s, in part under the direction of Platt. In 1944, G. M. Culwick summed up her and her colleagues' feelings about nutrition: "the Colonial

⁹⁵Ibid.

⁹⁶Ibid., pp. 151, 155.

⁹⁷*Hunger and Health in the Colonies: Report to the Fabian Colonial Bureau*, London, Fabian Colonial Bureau, March 1944, quote on p. 3.

Empire woke up all of a sudden, some eight years ago, to the fact that it was faced with nutritional problems of considerable magnitude...The chorus of woe evoked by...[*Nutrition in the Colonial Empire*]...showed that the little heeded scientific voices of the preceding years had after all been saying something of the greatest importance."⁹⁸

Although the forcefulness of such remarks was not strikingly novel, it certainly echoed a growing sentiment that had been vocalized softly by the HOLN and exuberantly by the Hot Springs Conference. G. M. Culwick's comments

echoed the rhetoric from the Hot Springs Conference had been. Although the idealism advocated there may have lacked a rational basis -- surveys were utterly inadequate, populations were unreachable, health workers were poorly trained -- it inspired a new ideological framework for considering public health problems in the developing world. To many, no technical fix could improve people's lives as much as adequate nutrition, and adequate nutrition for all would not be achieved without first-rate advocacy in the government of nations.

John Boyd Orr: Nutritionist, Idealist, First Director-General of FAO

Since the early-1930s, Orr had been the fiercest and most prominent advocate of improved nutritional standards and food supplies throughout the world. In 1943, he mapped out a comprehensive vision of a world food organization which would boost world-wide food production, monitor and set prices on staple foods, and spread advances in nutritional science. In sum, Orr believed that international co-operation on nutritional issues could "accelerate the march of mankind towards the higher civilisation which science has made possible."⁹⁹ These aspirations he tied to the soon-to-be named FAO.

Following a moving address at the conference which established FAO in November 1945, Orr was appointed to serve as the first Director-General of the newly created organization.¹⁰⁰ From the outset, Orr spent the majority of his time on two

⁹⁸G. M. Culwick, 'Nutrition in East Africa', in Veronica Berry (ed), *The Culwick Papers 1934-1944: Population, Food and Health in Colonial Tanganyika*, London, Academy Books, 1994, 85-92, on p. 85. Berry's introduction and compilation of the Culwicks' papers provide a superb perspective on the rare nutritional work in developing countries conducted before W.W.II, and on the considerable influence of Platt.

⁹⁹Orr, op. cit., note 78 above, pp. 44-55.

¹⁰⁰FAO subsumed the previously mentioned IIA. Phillips, op. cit., note 2 above, p. 3. Three important accounts have related the formation of FAO and Orr's influence on the process. See:

major projects: 1) the food shortage in Europe and 2) the attempt to establish a world food board. The latter represented all of Orr's previously accumulated hopes to vanquish hunger from the planet. As he worked earnestly on this issue, he scarcely had time to tend to other duties of the office, or to the pressures from nutritionists and others to sequester FAO into a number of divisions. To Orr, the science necessary for victory over malnutrition had long since been acquired, the solution remained primarily political. Nevertheless, he was unable to gather the necessary support to form the required huge and potent international structure. The greatest resistance came from Great Britain, while there seemed to be at least stifled support from the White House. In Great Britain, few could digest Orr's idealism at a time when the government feared for the nation's food supply. Severe droughts during the summer of 1945 had decimated grain supplies beyond their already low post-war level.¹⁰¹ A government that could scarcely guarantee adequate nutrition for its people found Orr's philosophy repellent.

FAO, at least superficially, hardly appeared capable of influencing world nutrition policy. The organization had a skeleton crew invested with an awkward combination of tall orders and exceedingly limited powers. During the first year, Orr followed the custom of having an afternoon tea with the entire staff. Everyone was able to fit in the space of a large living room.¹⁰² Although impressed by Orr, many members of the staff believed his grand plans to be "idealistic and unrealistic."¹⁰³ Undeterred, Orr clearly saw the mission of FAO as the ending "of hunger and the raising of the standard of living of the people in the underdeveloped countries".¹⁰⁴

Conclusion

FAO was the UN's first international health-related agency and was formed during heady times of optimism for a peaceful world free from hunger. The appointment of Orr as first Director-General of the organization was at once a triumph of liberal politics over a conservative old world order. For all of Orr's expressed optimism about the rewards to be reaped thanks to advanced nutritional science, he had analytically located the aetiology of hunger in socio-economic statistical indicators

Lubbock, op. cit., note 64 above, pp. 23-30; Gove Hambidge, *The Story of FAO*, Princeton, Van Nostrand Company, Inc., 1955; P. L. Yates, *So bold an aim*, Rome and Quebec, FAO, 1955.

¹⁰¹ *The World Food Shortage*, April 1946, London, His Majesty's Stationery Office, pp.1-8.

¹⁰² Ralph Phillips, interview, 8 September 1995.

¹⁰³ *Ibid.*

¹⁰⁴ Orr, op. cit., note 16 above, p. 201.

as early as the 1930s. Noting that the wealthy were overwhelmingly healthy and the poor were predominantly malnourished, he moved nutritional debate away from science and education and toward economics. Orr believed that the international priority for health in the post-war world should be universal access to staple foods priced within reach of all people. By focusing the work of FAO on food supply, Orr temporarily downgraded the position of the scientist-nutritionist in international policy.

During Orr's time at the helm of FAO, it became clear that UN agencies and the UN itself would have considerably restrained powers in international policy-making. Two other agencies soon entered the health arena, WHO and Unicef, and their positions hardly seemed stronger than FAO's. The governments of the world were prepared to deal with crises in nutrition, but not to attack malnutrition radically as had never been done previously. Before substantive nutritional programmes could be contemplated, the nutritionists would first have to identify the problems scientifically before making their policy and programmatic recommendations. Although Orr had enough demographic data to show that the world population increased by 22 million per year, mainly in the developing countries, and that many of those born suffered from malnutrition, rampant hunger in Europe would have to be his central priority.¹⁰⁵ Figuring out the basic hunger problems of the developing world would be a task left to Orr's successors.

¹⁰⁵John Boyd Orr Baron Boyd Orr of Brechin Mearns', op. cit., note 14 above, p. 67.



Chapter III

Nutrition after W.W.II

I was with Aykroyd and in transit going to America, and we met Platt in the airport who was a little cold with us. And we said that we were going to America for a conference and he said to us, 'well, I'm going to go to Africa to do **WORK**.'

Marcel Autret on an encounter in 1952, (emphasis his)¹

Nutrition as Panacea

After W.W.II, three major developments set an innovative and unique tone for international nutritional issues: firstly, a huge increase in researchers, mainly of paediatricians, in the developing world, secondly, the shoring up of FAO, and lastly, the formation of Unicef and WHO. Among researchers working on nutrition were several who gained international attention: Gomez in Mexico, Meneghello and Monckeberg in Chile, Brock and Hansen in South Africa, Bhattachariyya in Calcutta, McLaren in Lebanon, and Calvo in Venezuela.² These researchers were no less than pioneers in research which would emerge as a field in its own right. Their work drew the attention of young, freshly-minted medical doctors who would come to develop, influence, and eventually dominate the field of nutrition in the developing world.

According to popular scientific writing during the 1930s and 1940s, hopes for peace and stability were pinned on the spread of nutritional science and resources. In a nutritional book "intended for the layman" one University of London professor wrote ominously in 1938 that "The survival of democracy or its annihilation during the next few years may easily be determined by the measure of attention given in the various countries to what have come to be called the problems of human nutrition."³ When the book containing this comment was extensively reworked and reprinted in its third edition nine years later, the remark remained. This perspective was surprisingly plentiful in the press, undoubtedly inspired by the crisis in food supply much of the

¹Marcel Autret, interview, 14 April 1996.

²J. C. Waterlow, 'Childhood malnutrition in developing nations: looking back and looking forward', *Annual Review of Nutrition*, 1994, 14, 1-19, on p. 3. Also, Nevin S. Scrimshaw, interview, 25 July 1995.

³Sir J. C. Drummond, 'Preface', in A. L. Bacharach, *Science And Nutrition*, 3rd ed., London, Watts & Co, 1947, p. V.

world faced. Another popular book on nutrition used world food shortages to justify expanding common knowledge about the constituents of a healthy diet.⁴

The high hopes detailed in nutritional writings raised expectations for the wonders which could be realized through nutritional advances. Literature abounded with jargon about the creation of "a race of sturdy children" through the new science of nutrition.⁷ Such commentary circulated among nutritionists and government leaders and implied that nutrition might well be a central component of lasting peace and human advancement. Nevertheless, at the same time as such optimistic nutritional rhetoric was pronounced, a realization of the complexity of hunger and malnutrition problems emerged.

FAO's Early Nutrition Work

While many applauded Orr's effort and idealism, a dew of pragmatism, firmly based in science and surveys, descended into the mindset of some scientists and politicians. The *World Food Survey* was the first large-scale project conducted by FAO and ostensibly formed the scientific basis of Orr's plan for a World Food Board. Experts knowledgeable in nutritional issues from several governmental agencies joined with FAO to collect the necessary data for an estimate of caloric distribution throughout the world. Out of the 70 countries surveyed, many provided only general information about food production, and estimates of per capita caloric consumption were made accordingly. Conducted and published during three months of 1946, the survey confirmed the suspicion that the world's population was extremely hungry. The introduction to the survey reflected the conviction that had been held without concrete scientific support:

⁴ A. B. Callow, *Food and Health*, 3rd ed., Oxford, Clarendon Press, 1946, p. b.

⁵⁻⁶ No notes (revised)

⁷ E. W. H. Cruickshank, *Food and Nutrition -- The Physiological Bases of Human Nutrition*, 1st ed., Baltimore, The Williams & Wilkins Company, 1946, p. 11.

It is well known that there is much starvation and malnutrition in the world. Millions of people never get enough to eat, and a much larger number, not actually hungry, do not obtain the kind of diet necessary for health. Vague knowledge that this situation exists is not enough; facts and figures are needed if the nations are to attempt to do away with famine and malnutrition.⁸

When FAO embarked on the *World Food Survey*, many of its members believed that two large steps would lead to the end of hunger: the statistical determination of food consumption and distribution, and the provision of food and technology to help needy people improve agricultural output.

Scientific commentators outside of the ^{FAO} establishment found FAO's optimism unrealistic. Cruickshank, writing on the problem of the world food situation in 1946, just prior to the *World Food Survey*, attested to the enormity of the situation and stated that "The problem [of world hunger] is far greater than a mere increased production and a better distribution of food. Its ultimate implications are political, its present basis is the science of nutrition."⁹ Well aware of the change in direction and intensity of winds in the international community, he proclaimed that international agencies would be essential for solving global hunger problems. Hunger problems in the industrialized nations would be, and had been, solved merely by consumers taking scientific advice to heart. Unfortunately, he remarked, non-English speaking countries with their utterly deficient diets posed the greatest impediments to ending hunger.¹⁰

Before the *World Food Survey*, international health workers had few ideas about how to improve the situation. After the survey, the world food picture looked bleaker than previously imagined. According to the imprecise findings, more than half the world's population had a caloric intake below 2250 calories per day. Furthermore, in regions with average intakes of about 2250 calories, there were clearly large population sectors which were also malnourished. "Averages", the survey team wrote, "do not tell the whole story."¹¹ While the survey articulated the breadth of hunger innovatively, the underlying strategy for ending hunger was a weak and confusing thread throughout the document. For example, the survey definitively stated that hunger was consistently an indicator of poverty but asserted that the essential step for

⁸*World Food Survey*, FAO, Washington, D.C., 5 July 1946, p. 5.

⁹Cruickshank, op. cit., note 7 above, p. 11.

¹⁰*Ibid.*, p. 12.

¹¹*World Food Survey*, op. cit., note 8 above, pp. 6-7.

hunger eradication was to set nutrition targets based on survey information. Thus, the most pressing need was not to raise economic standards, but rather, to determine the agricultural supply missing from developing countries and provide it through exports along with expanded local production.¹² This notion, however, was agreed to be flawed. In a FAO Conference report, the Marketing Committee stated that it would be "hypocritical" to bemoan restrictions on agricultural production while malnutrition remained prevalent, and equally hypocritical to encourage greater agricultural output from farmers without sufficient demand. The purpose of making substantial headway quickly in the relief of hunger and malnutrition was to "establish confidence" in the organization.¹³ There was taciturn recognition that improvements were forthcoming in the industrialized nations. In addition to surveys, FAO believed that the revival and formation of national nutrition organizations could do much toward ushering in nutritional improvements in many countries, mostly European ones.¹⁴

It was against the foreboding, staggering backdrop of global malnutrition that Orr's *Proposals for a World Food Board* was said to be the FAO response to the *World Food Survey*. The two reports were actually published together. The proposals for a World Food Board rested on the notion that the current methods of commerce in food were not designed with the best nutritional interests of the world's people in mind. The report noted, in Orrian rhetoric:

food is more than a trade commodity; it is an essential of life, and the provision of food for the people should not be dependent upon the success or failure of measures promoted solely in the interest of trade...trade should be considered as the means of bringing sufficient food and other necessities for a full life within the reach of the people.¹⁵

The proposal asserted that from a policy perspective, the fundamental goal should be the provision of food to all people. With FAO's new knowledge of international food inadequacies, aid which targeted increases in food production through fertilizer, and industrial and agricultural improvements, would eventually overcome the problems.¹⁶ The basic philosophy behind such efforts was that nations could not rely on "charity"

¹²Ibid., pp. 19, 24, 25.

¹³*Report of the First Session of the Conference*, in Quebec City, October 16-November 1, 1945, Washington, D.C., FAO, 1946, pp. 5-6.

¹⁴Ibid., pp. 7, 19.

¹⁵*Proposals for a World Food Board*, Washington, D.C., FAO, 5 July 1946, p. 5.

¹⁶Ibid., pp. 5-6.

in the form of food aid for long; they had to become self-sufficient.¹⁷ The task of the World Food Board would essentially be to look after the food supply for the population of the entire planet. The envisaged functions of the board were:

1. To stabilize prices of agricultural commodities on the world markets, including provision of the necessary funds for stabilizing operations.
2. To establish a world food reserve adequate for any emergency that might arise through failure of crops in any part of the world.
3. To provide funds for financing the disposal of surplus agricultural products on special terms to countries where the need for them is most urgent.
4. To cooperate with organizations concerned with international credits for industrial and agricultural development, and with trade and commodity policy, in order that their common ends might be more quickly and effectively achieved.¹⁸

Thus this new UN instrument would work in numerous ways -- from playing the international Robin Hood for food distribution to setting the price of food on the international market. The pragmatic heart of Orr's ideology was that nutrition could only be addressed properly with food, and food production therefore had to be prioritized. The approach was a testament to Orr's insistence that **something** more be done than merely studies. Orr was the type of scientist who did not demand one-hundred percent certainty about an empirical finding before launching into a programme. Reasonable certainty with righteous underpinnings was all he required for embarkation. Unfortunately for Orr, the breadth of international problems and his recommended solutions were incompatible with the abilities of his tiny Washington office staff.

During his tenure from 1945-1948, Orr focused his efforts mainly on his World Food Proposal and its call for establishing a World Food Board. In the eyes of many, he did so to the detriment of the organization. According to Ralph Phillips, a close observer of the events unfolding after FAO's establishment and the chief of the Animal Industry Branch during Orr's stewardship, Orr

was so interested in his World Food Board that he left other things to one side including the setting up of an agricultural division, and governments were restive about where the organization was going in

¹⁷Ibid., p. 7.

¹⁸Ibid., p. 11. For a more detailed view of this proposal see: *Report of the FAO preparatory commission on world food proposals*, Washington, D.C., FAO, February 1947.

the agricultural field because there was a forestry division, a fisheries division, an economic and statistics division and a nutrition division all set up in those first six months following Quebec, but no agricultural [division].¹⁹

Orr's insistence on his plan, while not evoking "ill feeling" did create widespread "uncertainty".²⁰ Funding and personnel were plainly not sufficient to approach an international problem which involved the population of the planet.

Within FAO, the staff was torn between Orr's idealism and more practical science. Wallace Aykroyd, a prominent British nutritionist with impressive credentials from the HOLN, became the first director of FAO's Nutrition Division in July 1946.²¹ Phillips explained that after a "small and rather slow start" the Nutrition Division "was interested more in the technical aspects of mineral requirements, carbohydrate [and] protein requirements" while the Economics Division was pushing the World Food Board. From correspondence and documentation, however, it is clear that Aykroyd began to craft an intelligent platform for FAO nutrition plans from an early stage and, indeed, was interested in the World Food Board. Aykroyd believed that central to a food policy was increased understanding of the nutrition problems facing the better part of humankind. In his opinion, the World Food Board would stabilize world food prices, and, with the aid of FAO, expand production. The result, Aykroyd hoped, would be a major step in the fight against hunger; Aykroyd had already concluded based on the results of the *World Food Survey* that "there is much under-nutrition in the world as a whole and that more food is required." (emphasis his)²²

While Aykroyd supported Director-General Orr and was interested in expanding food production, his primary interest rested in nutrition research and "practical nutrition programs".²³ In his view, "nutrition research has not yet reached finality: scientific discoveries may be made which affect food policy in general and in many countries satisfactory information about the nutritional situation is still

¹⁹Ralph W. Phillips, interview, 8 September 1995.

²⁰*Ibid.*

²¹Hardy has written an interesting account of Aykroyd's early work. See: Anne Hardy, 'Beriberi, Vitamin B1 and World Food Policy', *Medical History*, 1995, 39, 61-77, on pp. 63-66.

²²Wallace R. Aykroyd, 'Nutrition and poverty - a brief world survey', October 1946, FAO Archives, 57.1D1, p. 2. Aykroyd nevertheless acknowledged that a general rise in socio-economic conditions, not simply increased food production, was the key to solving nutrition problems. He stated, "under- and malnutrition can be eliminated only by the creation of world prosperity." (p. 4)

²³*Ibid.*, p. 3.

lacking."²⁴ His broad knowledge of nutrition in developing countries provided him with key insights into how, and where, to embark on nutrition activities. Aykroyd believed that one of the first places to begin surveying the state of nutrition and catalysing supplementary food programmes was in Central America. Due to Central America's nutrition problems and its proximity to Washington (Aykroyd remarked that the air journey required less than twenty-four hours), Aykroyd began constructing plans which included encouraging the formation of a nutrition research centre and sending appropriate experts and technicians to advise programmes.²⁵ Later, while considering a proposal for nutrition training of staff from developing countries, Aykroyd noted that nutrition training in developed countries differed starkly from what was useful in "under-developed and mal-nourished" countries: "it is my experience that non-medical workers, who have taken a nutrition course in a well-fed country with a high standard of living, are at first quite at sea, and even after adjustment are of limited usefulness because of their lack of medical background."²⁶ Highlighting the dearth of appropriate nutrition training, Aykroyd further noted, "There is at present no fully satisfactory course in nutrition concerned with the problems of under-developed countries, anywhere in the world, though Platt appears to be moving in the right direction in connection with his colonial nutrition programme."²⁷ Although his influence may initially have been shadowed by larger developments in nutrition in Europe, Aykroyd foresaw the need to focus nutrition efforts, including training, toward developing countries. Given the embryonic state of nutrition in the UN, Aykroyd was truly the first nutritionist to begin steering nutritional concerns toward developing countries and to develop the nutrition policies that would rapidly become familiar at WHO and Unicef. Aykroyd's staff well reflected these desires. Dr. A. G.

²⁴W. R. Aykroyd, 'In the field of nutrition', 13 February 1946, FAO Archives, 57.1D1, p. 2. In this document, Aykroyd also presciently commented that FAO and WHO (still unestablished) would have their closest contact over nutrition issues and should therefore plan for "the machinery necessary for ensuring coordination." Furthermore, given the anticipated overlap between the two nutrition divisions, he concluded that "WHO and FAO should work in such close association [on nutrition] that for practical purposes, if not on paper, the nutrition sections or divisions of each form a single section." (p. 4) Considering the future conflicts over nutrition at these two agencies, Aykroyd's early attempts to avoid problems were profound. See also: W. R. Aykroyd, 'Points of contact between FAO & IHO [International Health Organization]', 15 February 1946, FAO Archives, 57.1D1.

²⁵W. R. Aykroyd, 'A nutrition program for Central America', 3 December 1946, FAO Archives, 57.1D1. In this document, Aykroyd employed the term "applied nutrition" to refer to school feeding programmes and other endeavours. One decade later, the term would be recycled and placed at the centre of UN nutrition policies.

²⁶W. R. Aykroyd, 'note on Dr. Clements' letter of March 7th 1946 to Mr. McDougall', 25 March 1946, FAO Archives, RG 57.1, series D1.

²⁷Ibid.

van Veen, who joined FAO's nutrition staff in 1947, stated in the same year that "the nutrition problems in the Far East, their study and the possible ways to their solution are of much more fundamental importance than the more short-term problems in Europe at the moment."²⁸

In spite of Aykroyd's ideas about nutrition in developing countries, the bulk of FAO's interest during this time was on food. For example, Phillips asserted that early in 1946, the pertinent conflict "was between whether we worked on food production or on the World Food Board and governments."²⁹ Since Orr could scarcely rally his own government to support him, disappointment was inevitable. Phillips believed that Orr was

ahead of his time in the sense that he wanted to get things done that governments weren't ready to do on an international scale. They wanted to make their own arrangements for food supplies and this sort of thing. [I saw him as] idealistic and unrealistic in the sense that he wasn't a good administrator, he didn't use his staff effectively.³⁰

To elucidate Orr's eccentric and ineffective style, Phillips cited a committee meeting at which a French staff member uncharacteristically presented his report in English without the help of an interpreter. Orr doodled during the ten-minute report and ignored the speaker's words, then asked for an English translation.³¹ This incident was emblematic of the broader manner in which Orr failed to listen closely to associates and follow through with tasks methodically. Phillips observed how Orr time and again sought the approval of the FAO Council for projects and then World Bank funding for implementation. The World Bank, however, always cited the need for engineers and scientists to evaluate such projects and work through them. This reluctance on the part of the World Bank and the associated failure of Orr's ideas "broke Sir John's heart".³²

Orr's management style may not have sat well with the staff, perhaps because he expected unrealistic undertakings of them. In the spring of 1947, according to staff in FAO's Nutrition Division, Orr "came in and threw some sort of an atomic

²⁸A. G. van Veen, letter to Dr. Lucius Nicholls (nutritional adviser to the Special Commissioner for South East Asia), 28 April 1947, FAO Archives, 57.3A3.

²⁹Ralph W. Phillips, interview, 8 September 1995.

³⁰Ibid.

³¹Ibid. See also: Ralph W. Phillips, *The World Was My Barnyard*, Parsons, West Virginia, McClain Printing Company, 1984, p. 133.

³²Ralph W. Phillips, interview, 8 September 1995.

bomb...Sir John told us that from now on every division of FAO would have to produce 'real hard stuff' and that we should have to follow only practical issues from now on."³³ Of particular concern to Orr at the time was an accurate assessment of nutrition in Europe, Latin America, and the Middle East. For the division, the assignment was an intimidating task and was further exacerbated by a tightened budget. In the view of Orr at the time, "Most of the ideals of Hot Springs have gone and the tides are against the United Nations now."³⁴

Orr's World Food Plan failed, and he left FAO discouraged by the defeat.³⁵ Marcel Autret, a French scientist with over a decade of experience in South East Asia, joined FAO's Nutrition Division in 1949.³⁶ He felt that pessimism permeated views on Orr's plans: "The World Food Plan struck people as being an illusion. At the time I arrived we were not speaking about it, it was too pretentious considering our little budget".³⁷ Little, if anything, good would be said of the plan later; in 1950, Aykroyd confidentially noted with resentment that the ideal of a "World Food Board" had resulted in a number of "unsatisfactory" staff members in the Nutrition Division.³⁸ Orr's intention has been viewed largely as a bout of naiveté, and the impact of his failure as a blip in international health policy-making. Far from insignificant, however, it was emblematic of the low regard governments would have for dealing with persistent, chronic hunger problems in a dramatic manner. Through a historical lens, it is clear that Orr's departure from FAO signified a comprehensive change in ideology which will become apparent in this and following chapters. The nutritional and organizational reins Orr held during his fleeting two years were passed to those less nutritionally-inclined and less idealistically inspired.

Enter WHO and Unicef

Very early in the life of FAO, its leadership recognized that other organizations would help shoulder the immense responsibilities which had already been adopted.

³³Miss Chatfield, notes on meeting 1 April 1947, in A. G. van Veen, letter to W. R. Aykroyd, 2 April 1947, FAO Archives, 57.3A4.

³⁴Ibid.

³⁵J. B. Orr, *As I Recall*, London, Macgibbon and Kee, 1966, pp. 191-201.

³⁶Most of Autret's international experience hailed from his work with the Pasteur Institute. Marcel Autret, interview, 14 April 1996.

³⁷Ibid.

³⁸W. R. Aykroyd, 'Notes by the Director of the Nutrition Division', 7 March 1950, FAO Archives, 57.1D1, p. 2.

The first session of the FAO Conference encouraged collaboration with United Nations Educational, Scientific and Cultural Organization (UNESCO) and International Labour Organization (ILO).³⁹ The Conference also anticipated the creation of a UN health organization (soon-to-be WHO) and looked forward to co-operation, particularly on nutritional matters.⁴⁰

In the same way that FAO and its predecessor, the HOLN, originally initiated work that dealt mainly with hunger limited to war-struck or industrialized areas, WHO and Unicef did the same. Unicef, first called the UN International Children's Emergency Fund, grew directly out of the United Nations Relief and Rehabilitation Agency (UNRRA), one of the most popular and successful early UN agencies. "Auntie UNRRA" as Donald Sabin, an early enthusiastic UNRRA worker, had called it in a poem, was celebrated in Poland where it had provided tremendous supplies to stave off disease and hunger. As UNRRA left Poland in mid-1947, Sabin wrote:

So out of the spirit of UNRRA,
Comes a guide that is simple and clear,
Peoples must truly work together,
To really banish fear!⁴¹

UNRRA's success had been so extraordinary and the remaining European hunger problems so overwhelming, that the UN created Unicef on 11 December 1946. From its inception, Unicef appealed to UN member governments for its financial sustenance.⁴² The Unicef leadership conceived of its work as aid for the thirty million malnourished children in Europe through "foodstuffs, clothing, medicines, and the necessary technical services...in war-torn countries".⁴³ Unicef estimated that the incredible sum of \$450,000,000 would be needed in order to conduct a minimalist programme of providing clothing and food aid to infants and nursing mothers.⁴⁴ Poor conditions in Europe unfavourably mixed with a bleak UN financial outlook meant that aid to the developing world would be inconceivable to Unicef, especially given the temporary and urgent nature of its work. In fact, Unicef was originally established for

³⁹*Report of the First Session of the Conference*, op. cit., note 13 above, p. 20.

⁴⁰*Ibid.*, p. 7.

⁴¹Donald R. Sabin, 'Auntie UNRRA', 28 June 1947, Unicef Archives, Sabin papers.

⁴²For a compelling and vivid account of Unicef's formation, see: Maggie Black, *The Children and The Nations: The Story of Unicef*, Hong Kong, Unicef, 1986.

⁴³International Children's Emergency Fund, 23 January 1947, Unicef Archives, Sabin papers.

⁴⁴*Ibid.*

a five-year tenure, after which time it was expected to shut down its operations permanently. Thus, long-term problems would not be addressed for years to come.

The uncertain fog that clouded the establishment of Unicef caused the organization tremendous hardships and frustrations during its first years and limited its scope of work to Europe.⁴⁵ Soon after its formation, its coffers were virtually empty and the first Executive Director, Maurice Pate, went to Washington, set up an office with his own funds, and began knocking on governments doors, begging for funding.⁴⁶ During W.W.I Pate was a young man and received experience in relief operations while working for Herbert Hoover's relief agency in Europe. Later, he spent a dozen years working in business and as an investment banker. During W.W.II, he returned to work for Hoover, this time running an Allied prisoner food relief programme, and his work there helped advance him for the top position at Unicef.⁴⁷

The majority of Unicef's initial funds went toward milk conservation programmes that had been recommended by FAO and were a continuation of UNRRA policies.⁴⁸ Maggie Black summed up the importance of milk when she wrote: "the instinctive reaction to the problem of the hungry or malnourished child took one exclusive form: milk."⁴⁹ Although during Unicef's first few years Pate was in charge of distributing nearly as much funding as the entire UN had required, there were calls to simplify the international aid system and to terminate Unicef. Even Aykroyd at FAO doubted that Unicef could continue to collect sufficient funds for operation and believed the whole idea of Unicef's perpetuation was "open to question."⁵⁰ Nevertheless, Aykroyd perceived a silver lining in the perpetuation of Unicef: "FAO could make good use of a share in the proceeds [of Unicef], which would enable it...to undertake other projects concerned with child nutrition."⁵¹ Thus, from an early stage, Unicef was viewed as a potential source for boosting the nutrition budget at FAO.

⁴⁵Maurice Pate, *Unicef Executive Director, 1947-1965*, New York, Unicef, Unicef History Series, monograph XIII, 1989, p. 5.

⁴⁶E. J. R. Heyward, interview, 5 May 1995.

⁴⁷Maurice Pate, *Unicef Executive Director, 1947-1965*, op. cit., note 45 above, pp. 15-19.

⁴⁸W. R. Aykroyd, 'FAO', *The Commonwealth Bureau of Animal Nutrition, Nutrition Abstracts And Reviews*, 1953, 23(2), pp. 229-43, on p. 237.

⁴⁹Black, op. cit., note 42 above, p. 141.

⁵⁰W. R. Aykroyd, memo to FAO acting Director-General on United Nations Appeal for Children, 14 October 1948, FAO Archives, 57.1C1.

⁵¹Ibid. Aykroyd identified three areas where FAO could, with Unicef funds, provide assistance: 1)technical assistance in countries Unicef planned to begin operations, 2)assistance in the development of milk-drying industries, and 3)establishment of pilot child feeding programmes.

Pate fought hard for Unicef's existence, against a grain that included FAO's leadership. In a confidential letter to Norris Dodd, the FAO Director-General, Pate touched on his concern about the current of opinion against Unicef during 1950. Implying that FAO might somehow attempt to subsume Unicef, Pate wrote,

I am quite in accord with the idea of simplification in the organization of International agencies. The long-term answer might be the integration of all United Nations agencies into a single body. However, unless and until this takes place, any decision with respect to [sic] the United Nations International Children's Fund should not be based on purely mechanical considerations. **Any body which takes an active position toward the termination of the Fund, should be equally ready to take over the responsibility which this step entails and give assurance in advance of its ability to fulfill this responsibility.** (emphasis mine)⁵²

In conclusion, Pate pointed out the impending shift of Unicef policy away from emergency operations and toward "attacking the fringe of the age-old problems of the needs of children [in underdeveloped countries]." ⁵³ Pate further remarked on the high quality of interactions between FAO's Nutrition Division and Unicef and warned that "any change in our present form of cooperation would be given most careful consideration." ⁵⁴

Unicef's problems were mounting on a number of ideological and practical fronts. A. J. Wakefield, the resident representative of the Secretary-General to the UN, was based in Haiti where the dire state of malnutrition had encouraged Unicef to immediately embark on feeding projects. ⁵⁵ In a confidential letter to the chief of the UN's technical assistance section, Wakefield expressed his exasperation over the Unicef representative's "eagerness for 'improving nutrition' and for 'the establishment of a nutrition service', which in local medical as well as high political circles spell the importation and distribution of free food by Unicef." ⁵⁶ In his communications with other UN personnel, Wakefield shared his views discreetly because "The man who

⁵²Maurice Pate, letter to Norris E. Dodd. Washington, D.C., 13 May 1950, UN Archives, CF9D 79, folder A023, Heyward files, p. 2.

⁵³*Ibid.*, p. 3.

⁵⁴*Ibid.*

⁵⁵A. J. Wakefield, letter to David Hunter (Unicef), Port-au-Prince, Haiti, 6 July 1950, FAO Archives, 57.1 B2.

⁵⁶A. J. Wakefield, letter to Gordon Menzies, Port-au-Prince, Haiti, 25 July 1950, FAO Archives, 57.1 B2. Wakefield sent a copy of this letter to Aykroyd in the hopes of rallying his support against food distribution projects.

becomes known as having endeavoured to restrict the visible and popular aid advertised as available from Unicef, would not get very far with proposals aimed at the basic causes of nutrition [sic], or any other problem."⁵⁷ Wakefield therefore sought surreptitiously to inject FAO's technical personnel into the issue, with the hope that they would alter Unicef's plans. The basis for Wakefield's concern was that Unicef was applying relief measures used after catastrophes to chronic hunger and malnutrition problems. With some technical assistance from nutrition experts, it was hoped Unicef would be enlightened.⁵⁸

Unicef's leadership may have been distracted from technical concerns by festering administrative and financial difficulties. After Unicef received a temporary extension in 1950 for its existence, Donald Sabin, the chief of milk conservation, was overwhelmed by the concomitant continuing uncertainty. In December, he received a letter from one of his utterly frustrated engineers in Paris, W. F. Richards, who had heard that further salary reductions could be forthcoming. Richards bemoaned the already low salary he received and wrote,

Frankly, had it been for salary that I joined [Unicef] I would have never joined. I can get a far larger salary in the U.S.... Years ago I learned one lesson and that was no matter how far you were away from home, always keep enough money in your pocket to get home. If the adjustment is not satisfactory to me, there will be no argument on my part, I will give you 30 days notice, and return to the States. I have enjoyed my work and the Unicef programme.⁵⁹

In a letter to Unicef headquarters that reflected Richards' concerns, Sabin wrote of the handicap incurred by having only temporary staff and recommended

that we [Unicef] take advantage of Unicef's new lease of life and offer term contracts to those individuals whose services we can envision as being required for a reasonable period in the future...I cannot be certain that they will accept such contract [sic] but I feel it will ease the burdens of this office greatly and will permit some long range planning to be done...I am sure you must be as sick as I am of this continual uncertainty as to availability of staff and unfortunately as we are all well aware, it takes several months for a man to get sufficiently acquainted with our programme to be of much value to us. Then if he only stays a year or two we can consider we have lost heavily by failure to secure

⁵⁷Ibid.

⁵⁸Wakefield, op. cit., note 55 above.

⁵⁹W. F. Richards, letter to Donald R. Sabin, Paris, 6 December 1950, Unicef Archives, Sabin papers.

the maximum services which we have a right to expect from technical people.⁶⁰

Such overwhelming managerial, financial, and programmatic setbacks long delayed Unicef's foray into nutritional concerns in the developing countries.

At the height of Unicef's assistance in Europe during the spring of 1950, its programmes were reaching six million mothers and children. These food supplementation programmes were viewed as long term measures insofar as they promoted governmental cognizance of the value of protective foods "as a basic means of building stronger and more disease-resistant populations."⁶¹ With the return of normalcy and stability in Europe, the nature of Unicef assistance rapidly changed. Rhetorically, Unicef stated that it had shifted its central interest around work in developing countries beginning in 1951,⁶² statistically, Unicef allocated the smallest percentage of its budget during its first decade to nutritional work, particularly in the developing world. From 1947 to 1959 child nutrition represented only 10% of Unicef's entire budget, mainly due to expenditures in the late 1950s. In contrast, child health services and mass campaigns against infectious diseases represented 42.1% of the budget. Nearly the majority of Unicef's spending, 47.9% during those twelve years, was allocated for emergency relief, mainly in Europe.⁶³ As a result, Unicef's operations through the 1950s will be de-emphasized in this chapter, not to reflect a bias, but rather, a historical reality. The figures themselves reflect Unicef's institutional priorities -- primarily saving children's lives -- as well as the low regard for nutrition programmes at that time. Malarial eradication programmes that tangibly saved children's lives garnered more attention than community-based nutrition programmes that gradually changed poor food habits and might ultimately lead to improved child survival. Martha M. Eliot, the U.S. representative on the Executive Board of Unicef, lobbied strongly in 1952 and 1953 for a permanent extension on Unicef's existence. In a speech given before a Congressional committee, Eliot noted that Unicef's emphasis had shifted drastically toward long-range programmes. The majority of her examples included milk conservation and distribution programmes that

⁶⁰D. R. Sabin, letter to Mr. Karl Borders, 14 December 1950, Unicef Archives, Sabin papers.

⁶¹'Unicef assisted feeding programmes', 1952 or 1953, Unicef Archives, PR-NU-001, p. 1.

⁶²'Unicef assistance for children', in 'The nutritional work of FAO, WHO and Unicef', *Proceedings of the Nutrition Society*, 1956, 15(1), 1-40, on p. 24.

⁶³Burhan Ilercil, 'Unicef Programme Statistics 1947-1979', New York, November 1985, Unicef Archives, Unicef History Project, CF/HIST/IC-85-3, HIST 40 Series, pp. 40/1.

had widened community interest in nutrition in underdeveloped countries.⁶⁴ While most of Unicef's work had been in milk distribution, Unicef's own reports suggested that the impact of such projects was minimal. A report to the Executive Board in 1952 regarding Unicef's feeding programmes in Asia pessimistically reported that given Unicef's moderate funds and the huge quantity of children needing assistance, "Unicef could not hope to make a significant contribution by attempting mass supplementary child feeding programmes."⁶⁵ While the Board was slow in recognizing the truth of such findings, politically it was expedient to push the image of successful milk feeding. Thus Eliot's efforts, along with other members of the Executive Board, ensured Unicef's continuation. Few in government or at the UN questioned the nature of Unicef programmes: development was still very much in its infancy.

Since 1946, the UN had had an interim world health commission that had many functions, particularly epidemiological surveillance.⁶⁶ The UN created WHO, like FAO, as an official, permanent UN specialized organization. WHO inherited specific responsibilities of the Office International d'Hygiène Publique, the HOLN, and the Health Division of UNRRA. The UN envisaged WHO as the international agency that was to deal with all health concerns and officially established it on 1 September 1948.⁶⁷ Its initial attention was directed at coping with epidemics in Europe, and it did not establish its Nutrition Section until May 1949.⁶⁸ WHO appointed Frank Clements, an Australian doctor, to be the first chief of the Nutrition Section. Clements had conducted nutrition surveys in Papua New Guinea where he had realized that children were dying of diseases exacerbated by malnutrition.⁶⁹ At first, WHO's leadership was weary of Unicef's presence, particularly of the chairman of its Executive Board,

⁶⁴Martha M. Eliot, 'Statement by Dr. Martha M. Eliot', Washington, D.C., 1952, Unicef Archives, 88R025, Box T-006, Teply files.

⁶⁵'Experience with Unicef-Assisted Feeding Programmes in Asia', New York, 3 April 1952, E/ICEF/191.

⁶⁶Ritchie Calder, *Ten Steps Forward: World Health 1948-1958*, Geneva, WHO Division of Public Information, 1957, p. 5.

⁶⁷FAO and WHO were officially specialized agencies and had considerable autonomy since their budgets were figured independently. Unicef, on the other hand, was considered to be part of the UN itself and therefore was allocated funds from within the UN budget. See: P. Dorolle, 'International co-operative activities in the field of nutrition: an introductory statement', in 'The nutritional work of FAO, WHO and Unicef', *Proceedings of the Nutrition Society*, 15(1), pp. 1-40, on p. 2. Even before WHO's official establishment, it was known as WHO. In 1947, Orr commented that WHO's nutrition efforts were two to three years behind FAO's. Miss Chatfield, notes on meeting 1 April 1947, in A. G. van Veen, letter to W. R. Aykroyd, 2 April 1947, FAO Archives, 57.3A4.

⁶⁸*Yearbook of the United Nations, 1948-49*, Department of Public Information, United Nations, Lake Success, New York, 1950, p. 1038.

⁶⁹Robert Burgess, interview, 12 July 1996.

Rajchmann. Rajchmann had been strongly favoured for the position of WHO Director-General and since he was not chosen, WHO feared that he would have Unicef subsume WHO responsibilities and rival WHO. This created an atmosphere of tension that lasted throughout Rajchmann's five-year tenure as chairman.⁷⁰

The early history of WHO, FAO, and Unicef reveals that these organizations, racked by the legacy of the war, were not prepared to direct attention and aid to hunger in the developing countries. As the Marshall Plan morbidly pronounced, Europe was in disastrous condition economically and physically. Three years after the war, FAO released a survey on the world food situation which led it to state that only recently had nations recognized that world-wide shortages of agricultural supplies were more than a "short-term" phenomenon.⁷¹ Thus, all resources had to be directed toward the people in need in Europe who had been assaulted by the war. FAO, however, took an early and unusual interest in hunger in the developing countries and rapidly made important observations there. Up to 1948, there were only a trifling number of projects to improve nutrition in the developing world -- some supplementary food programmes in Egypt and early discussion with the ministries of health in Ethiopia.⁷² Although a few bureaucrats from within these agencies called for wider exploration of hunger in the developing countries, for the most part such work was left to the new researchers exploring these problems with an intensity heretofore unknown. While the researchers often had some contact with the new UN health agencies, their exposure tended to be limited. Their ties to universities and governments were stronger. In 1950 FAO initiated the Expanded Technical Assistance Program (ETAP) which, as its name suggests, sought to provide technical expertise in the field to countries requesting such aid.⁷³ ETAP enabled FAO's Nutrition Division to provide substantive aid centred in developing countries and to vastly expand the Nutrition Division's funding.

⁷⁰E. J. R. Heyward, interviews, 5 May 1995 and 12 September 1995. In 1965, Heyward wrote that Dr. Ludwik Rajchman "gave strong leadership to the Board, and Unicef took the initiative in deciding how to use its funds. Unfortunately, he had bad relations with WHO. On his departure it was necessary to 'mend fences'". E. J. R. Heyward, 'Notes on history of Unicef "policy"', 17 March 1965, Unicef Archives, CF/HST/1985/034/Anac 03/11, p. 3.

⁷¹*The State of Food and Agriculture-1948*, Washington, D.C., FAO, 1948, pp. 1-3.

⁷²*Ibid.*, p. 62.

⁷³W. R. Aykroyd, 'FAO and nutrition', in 'The nutritional work of FAO, WHO and Unicef', *Proceedings of the Nutrition Society*, 1956, 15(1), 1-40, on pp. 4-5.

Researchers Arrive in the Developing World

Remarkably few researchers had any extended field experience in the developing world before W.W.II. Those who did, such as Aykroyd, Burnet, and B. S. Platt broke new and fertile ground for their peers, students, and successors. Aykroyd, who had conducted a superb study of beriberi during the 1920s in Newfoundland, had extensive experience with colonial malnutrition most prominently shown in the aforementioned HOLN report, 'Nutrition and public health'.⁷⁴ Platt, a British nutrition expert with extensive experience in beriberi in China, directed the MRC's Human Nutrition Research Unit, attended the Hot Springs Conference, and inspired a number of young physicians to devote their careers to nutritional issues.⁷⁵ One such student was John Conrad Waterlow of Britain, who received his MD in 1942 and began nutritional work in Guyana, Trinidad, and Jamaica, with the Colonial Office during May 1945.⁷⁶

Waterlow attributed his roots in nutrition to Platt's insistence that nutritional issues would be the central international problem after the war. In Waterlow's eyes, the 1939 publication of *Nutrition in the Colonial Empire* had cast light on a previously inconceivable world of misery and scientific opportunity.⁷⁷ The war itself had produced a number of nutritional problems in populations unaccustomed to acute and prevalent malnutrition. During a nutritional survey in 1946, Platt had observed a form of malnutrition in the British West Indies that had not been previously identified in Great Britain. Following Platt's observations, Waterlow noted a corresponding relationship between decreased food supplies -- promoted by the torpedoing of many of the freight ships carrying essential imported food -- and a rising number of children with gross oedema and massive hepatomegaly who were dying.⁷⁸ Working with a skeleton crew, Waterlow investigated these patients, and hesitantly biopsied the livers with a large veterinary needle. Much to his surprise, he found that the livers were loaded with fat, leading to his coining the term "fatty liver disease". Moreover, he concluded that the disease was certainly brought on by a protein deficiency, possibly

⁷⁴For an enlightening description of Aykroyd's role in beriberi policy and science, see: Hardy, op. cit., note 21 above, pp. 64-66.

⁷⁵J. C. Waterlow, interview, 7 June 1995.

⁷⁶Waterlow, op. cit., note 2 above, p. 2.

⁷⁷J. C. Waterlow, interview, 7 June 1995.

⁷⁸Waterlow, op. cit., note 2 above, pp. 2, 3.

concomitant with carbohydrate overfeeding.⁷⁹ It is a testament to the virgin and disconnected nature of the field of nutrition that only after returning to Britain did Waterlow realize that his patients closely resembled those which Williams had described as suffering from kwashiorkor in 1933.⁸⁰ Nevertheless, in his publication he hesitated definitively calling his finding kwashiorkor, and instead employed the term fatty liver disease. Waterlow's findings were hugely important for policy makers, scientists, and institutions. On one hand, he had uncovered or essentially rediscovered, a disease thought to be very common in the developing countries. On the other, by working in a developing country and making this breakthrough, his research highlighted the advances scientists could make by studying malnutrition problems at their source. The MRC preface to Waterlow's magnum opus celebrated the importance of Waterlow's work for its scientific content and for highlighting "the advantages, at least for work in colonial areas, of an arrangement whereby the investigating field worker is based on a well-provided, permanent research organization".⁸¹ The anonymity in which kwashiorkor had flourished would soon disappear with the increased interest in the new science of nutrition.

Nevin S. Scrimshaw, then a promising young MD at the University of Rochester, asserted that, as far as a person interested in nutrition was concerned in the 1940s in the U.S., role models were sparse. He believed "there was McCollum, Philip Jeans, the pediatrician in Iowa, Emmet Holt in New York, and just a little later Grace Goldsmith at Tulane, and a generation earlier it had been Goldberger; none of these people had any international experience or interest in contrast to the British". These physicians, however, provided a target for Scrimshaw's motivation to work in uncharted yet discouraged medical areas. Thus, Scrimshaw related, "when I in 1949 went down to Guatemala [to work on nutrition], both my professors at Rochester told me frankly that I was throwing my life away".⁸² In the eyes of his mentors, it would have been irresponsible for Scrimshaw to dedicate his brilliant mind to nutrition in the developing countries. He persevered and in Guatemala founded INCAP (the Institute of Nutrition for Central America and Panama), among the first institutes in the developing world dedicated to investigating nutritional issues. His work there quickly drew the attention of FAO and WHO administrators. After a conference in Rio de

⁷⁹J. C. Waterlow, *Fatty Liver Disease in Infants in the British West Indies*, London, HMSO, 1948, p. 76.

⁸⁰J. C. Waterlow, interview, 7 June 1995.

⁸¹Waterlow, op. cit., note 79 above, p. A2.

⁸²Nevin S. Scrimshaw, interview, 26 July 1995.

Janeiro attended by Scrimshaw, Aykroyd wrote the following comment to Emma Reh, an FAO technical expert at INCAP: "[Dr. Scrimshaw] is of a thrusting northern type and does not find it easy to adapt himself to the more dilatory methods of other regions...It may be that he is pushing ahead rather too fast with the INCAP program and trying to obtain results in too short a time. This is, however, better than the opposite procedure."⁸³ From this time onwards Scrimshaw remained among the most prominent nutritionists in international health, and he will therefore be mentioned frequently throughout the following chapters.

The Brock-Autret Report: Kwashiorkor Rediscovered

The 1949 Joint FAO/WHO Expert Committee on Nutrition had a hunch that a study of kwashiorkor could lead to revelations about the prevalence of the disease in Africa. As understanding of the natural history of the disease was deficient, policy implications were shrouded in ignorance. The study that the Expert Committee mandated set a focus for nutritional research on hunger that had clinically-identifiable symptoms.⁸⁴ The gross symptoms of oedema, dyspigmentation of skin, and fatty liver had stunned doctors and peaked their interest. Although WHO had been the original designate for research, FAO expressed its desire to move into this rich scientific territory too. Thus, WHO appointed J. F. Brock of the University of Cape Town to conduct the research with Marcel Autret of FAO's Nutrition Division. They were given the two-month task of searching out the horrific symptoms of kwashiorkor along swaths of South Africa, Kenya, Uganda, Rwanda-Urundi, Belgian Congo, French Equatorial Africa, Nigeria, the Gold Coast, Liberia, Gambia, and Senegal. Autret arrived in Kampala late in October 1950, and Brock conveyed his thanks to Aykroyd for having wisely chosen a "pleasant and useful travelling companion."⁸⁵ Enthusiasm

⁸³W. R. Aykroyd, letter to Emma Reh, 28 June 1950, FAO Archives, 57.1A5. The prolific correspondence between Reh and Aykroyd reveals the difficulties that the UN's first technical experts faced in the field. Further, their personal commentary on the character of their peers conveys the importance of interpersonal relations and is fascinating in its own right. As Reh left Scrimshaw in 1951, she found him better equipped to face the problems ahead: "Dr. Scrimshaw has realized many things he did not know before, and he seems perfectly willing to adapt. Like anyone else, it takes him a long time to change his mind, but finally he does." Emma Reh, letter to W. R. Aykroyd, 16 June 1951, FAO Archives, 57.0A1.

⁸⁴*Joint FAO/WHO Expert Committee On Nutrition, Report on the First Session, Geneva 24-28 October 1949.* Geneva, WHO, 1950, p. 15.

⁸⁵J. F. Brock, letter to W. R. Aykroyd, Kampala, 29 October 1950, FAO Archives, 57.1 B2. Brock brought "a queer hitch" to Aykroyd's attention in this letter. Two conflicting reports about conducting their research in Gambia had led Autret to surmise that Platt was obstructing them. I came across no evidence for this assertion. Whatever the matter was, Brock and Autret did visit the territory.

for kwashiorkor was heightened before Brock and Autret even completed their field study. Aykroyd in November 1950 reported to the Unicef Executive Board that they would probably be interested to learn more "about a formidable disease due to protein deficiency, called by a variety of names, which affects young children after the period of weaning in many parts of the world."⁸⁶

The Brock-Autret report identified cases of kwashiorkor in every nation visited. Further, it elucidated the major symptoms of the disease, reviewed relevant literature, and discussed treatment. The main finding that kwashiorkor appeared to be triggered by a diet low in protein, usually in weaning infants, was much the same observation made by Williams nearly two decades earlier. However, the broader survey information revealed that given the low per capita availability of animal protein in every African nation, kwashiorkor and malnutrition could only be expected. As for the solution, the authors reiterated findings already made that animal protein, especially milk, and nutrition education were perhaps the most effective steps to avert kwashiorkor. According to Brock and Autret, whose survey data gave them few concrete statistics, "much" kwashiorkor resulted from poverty and "much" from the ignorance of mothers.⁸⁷ Talk of milk solutions reverberated in the ears of UN administrators, particularly at Unicef, which had been distributing dried skim milk supplies across Europe for years. At least as far as immediate policy was concerned, the most grotesque disease of malnutrition was identified and its solutions -- milk and "energetic educational measures" -- awaited in the wings.⁸⁸

Just before FAO and WHO published the Brock-Autret report, Brock and Autret had received complicating word from Waterlow, then in the Gambia, that he had come across cases not to be regarded as kwashiorkor, "but as nearer to marasmus".⁸⁹ His comment, a footnote in the report, suggested that kwashiorkor might be on one side of the malnutritional spectrum with marasmus on the other.⁹⁰ Thus, kwashiorkor and marasmus might be pronounced symptoms of malnutrition as opposed to strictly defined diseases in their own right. The line separating the two suddenly became blurred; marasmus had traditionally been associated with caloric deficiency, kwashiorkor with protein deficiency. This initial perplexity began paving the highway for scientific misunderstanding and controversy that endured for decades.

⁸⁶W. R. Aykroyd, 'Statement to the Executive Board, Unicef', 28 November 1950, FAO Archives, RG 57.1 series H1, p. 1.

⁸⁷J. F. Brock and M. Autret, *Kwashiorkor in Africa*, FAO, Rome, 1952, p. 66.

⁸⁸*Ibid.*, pp. 67-68.

⁸⁹*Ibid.*, p. 23.

⁹⁰*Ibid.*

Whatever confusion persisted as to the nature of kwashiorkor encouraged research institutions to come forward with ever greater funds for institutes and surveys in the developing countries. This enthusiasm also translated into shaping the primary concerns of the UN agencies. The recommendations Brock and Autret issued at the end of their report fuelled research grants for dozens of scientists. Their findings, though simply part of a continuum of observations in Africa begun by Williams, magnetically drew researchers and policy makers concerned with hunger. The disfiguring signs of kwashiorkor and its apparently simple cure with protein, far from leading linearly to substantive programmes, provided a springboard for further, more detailed research efforts. Brock and Autret summoned WHO and FAO to rally clinical and biochemical research on the "fascinating and important" problems linked to kwashiorkor.⁹¹ These problems included an investigation into the cause of the dermatosis seen in kwashiorkor victims and treatment by amino acids and vitamins. They implied that these were the scientific agenda whereas practical concerns included food intake data, the composition of African mothers' breastmilk, cooking methods, weaning methods, and protein sources besides milk. Although the prevalence of kwashiorkor was unestablished, Brock and Autret reported that their observations "justify emergency action".⁹² UN administrators appeared eager to embrace kwashiorkor as the central problem of hunger in Africa and other poverty-stricken areas.

In one year's time, the focus of nutritional concern had radically shifted. The first Joint FAO/WHO Expert Committee on Nutrition report that dealt with severe malnutrition, published only a few months before the Brock-Autret report, made absolutely no mention of kwashiorkor, nor its symptoms, even under the heading of "primary protein deficiency".⁹³ The proceedings referred exclusively to disasters that might occur in the "western world", a reflection of the long-intact blinders that had led consultants and medical personnel for decades to ignore chronic persistent hunger and what was about to be the central disease related to severe malnutrition.⁹⁴

⁹¹For an excellent summary and analysis of the scientific content of the Brock-Autret report, see: Kenneth J. Carpenter, *Protein and Energy: A Study of Changing Ideas in Nutrition*, New York, Cambridge University Press, 1994, pp. 149-53.

⁹²Brock and Autret, op. cit., note 87 above, p. 69.

⁹³*Prevention And Treatment Of Severe Malnutrition In Times Of Disaster*, WHO Technical Report Series no. 45, Geneva, WHO, November 1951, pp. 19-20.

⁹⁴*Ibid.*

Ramifications of the Brock-Autret Report

Though non-existent in the western world, kwashiorkor rapidly moved into the lexicon of international nutrition priorities. A constellation of establishments and findings closely following Brock's and Autret's observations on kwashiorkor shored up institutional commitments to unravelling the intricacies of this disease. Late in November 1951, FAO planned to have Autret return to the search for kwashiorkor, this time in Central America. WHO, not wanting to be excluded from the study, sent along Moisés Béhar of INCAP to accompany him. Scrimshaw had hand-picked Béhar for the task after Béhar had informed Scrimshaw that, in fact, he had seen the disease WHO described.⁹⁵ Béhar, a Guatemalan, found Autret to take a rather selfish view of the project as team leader, and in the end, it was Béhar who wrote up the report.⁹⁶ Their findings confirmed the existence of kwashiorkor throughout Central America.⁹⁷ Similarly, Waterlow worked as a WHO consultant with A. Vergara of the FAO Nutrition Division on the same task in Brazil in 1953.⁹⁸ Like previous surveys, the researchers were able only to establish existence, not incidence. Nevertheless, early in 1952 Unicef engaged in discussions with FAO about arranging kwashiorkor control programmes in developing countries.⁹⁹

The *Second World Food Survey* provided rough estimates of caloric as well as protein distribution world-wide.¹⁰⁰ Although the third session of the joint FAO/WHO Expert Committee recognized the possibility and existence of cases of malnutrition in an intermediate stage between kwashiorkor and marasmus, it had not been expected that such cases would be significant.¹⁰¹ Waterlow and Vergara, however, found numerous cases of *distrofia pluricarencial* (the name used for kwashiorkor in Brazil)

⁹⁵Moisés Béhar, interview, 29 December 1995. Scrimshaw had not yet encountered kwashiorkor. Béhar had a new and promising private paediatric practice at the time and had seen abundant cases of kwashiorkor in the hospital wards.

⁹⁶Ibid. Autret admitted that he had been embarrassed to be assigned such a young doctor who had never before conducted a survey. Marcel Autret, interview, 14 April 1996.

⁹⁷Marcel Autret and Moisés Béhar, *Síndrome Policarencial Infantil (Kwashiorkor) and Its Prevention in Central America*, Rome, FAO, FAO Nutritional Studies no. 13, 1954.

⁹⁸J. C. Waterlow and A. Vergara, *Protein Malnutrition in Brazil*, Rome, FAO, FAO Nutritional Studies no. 14, 1956. For study dates, which differ substantially from publication dates, see: J. C. Waterlow (ed), *Protein Malnutrition - Proceedings of a conference in Jamaica 1953, sponsored by FAO WHO and Josiah Macy Jr. Foundation*, New York, Cambridge, University Press, 1953, p. vii.

⁹⁹Charles A. Egger (Unicef Director of European and Eastern Mediterranean Regional Office), letter to Aykroyd, 4 March 1952, FAO Archives, 57.1B2.

¹⁰⁰*Second World Food Survey*, Rome, FAO, November 1952.

¹⁰¹*Joint FAO/WHO Expert Committee On Nutrition: Report on the Third Session*, Rome, FAO, FAO Nutrition Meetings Report no. 7, December 1953.

which fell in this intermediate stage and were identified by variable dermatosis and hair dyspigmentation, less cirrhosis of the liver, weight loss and oedema. In a clearer manner than past studies, the authors pinpointed the onset of kwashiorkor to weaning and associated low-protein foods. They gave credit to Unicef for providing milk to Maternal and Child Welfare clinics where death rates subsequently plummeted.¹⁰² Unicef, the authors believed, was on the right track by distributing dried skim milk, then one of the best treatments for kwashiorkor. Protein malnutrition could be avoided, according to the authors, by increased distribution of protein-rich food to poor families.¹⁰³

After three years working on the problem at the University of the West Indies, Waterlow motivated the MRC to found the Tropical Metabolism Research Unit at the University in 1954. From the start the Unit was largely Waterlow's domain, and focused on kwashiorkor. Contemporaneously the MRC established a similar unit in Uganda; Vis in Zaire began parallel work; Scrimshaw opened a metabolic unit in Panama; Gopalan managed the Nutrition Research Laboratories in India; and Olson transplanted his nutritional work from South Africa to Thailand.¹⁰⁴ Additionally, The LSHTM Human Nutrition Department began offering a six-month course in tropical nutrition in the late-1940s. The graduates of this course, who were predominantly women, took up new nutritional adviser posts in the colonial offices to conduct nutritional survey work.¹⁰⁵ All of these rich developments in nutritional research in the developing world ensured a steady flow of information about scientifically interesting nutritional issues, especially kwashiorkor. These institutions were largely unconcerned with policy or practicality; nevertheless, their emphasis frequently influenced the directors at FAO, WHO, and Unicef. In 1955 WHO's Nutrition Section confidently stated that "Kwashiorkor is without doubt the most important nutritional public health problem of the present time."¹⁰⁶ While kwashiorkor had a major impact on scientific

¹⁰²Waterlow and Vergara, op. cit., note 98 above, p. 21.

¹⁰³Ibid., p. 38.

¹⁰⁴Waterlow, op. cit., note 2 above, pp. 1-19. Waterlow's papers from the Tropical Metabolism Research Unit are held at the Contemporary Medical Archives Centre (CMAC) at the Wellcome Institute for the History of Medicine, London. The vast majority of his documents are exceedingly technical or deal with financial and personnel operations at the Unit.

¹⁰⁵J. A. S. Ritchie, *Teaching Better Nutrition*, Washington, D.C., H. K. Press for FAO, 1950, pp. 143-44.

¹⁰⁶'Outline of Nutrition Programmes in Public Health, notes on the fight against malnutrition in the field of public health', 1955, Geneva, Division of Organization of Public Health Services, Nutrition Section, document #MH/AS/32.56, LSHTM Archives, WHO reports box, p. 37.

malnutrition ventures, it arguably had more potent implications for the very conception of hunger, especially seen through the lens of UN structures.

Expert Committees

Virtually from the time the UN established WHO in 1948, administrators clearly advocated collecting advice on international health issues through the medium of expert committees that consisted of members "chosen for their abilities and technical experience".¹⁰⁷ The desire for technical expertise in numerous nutritional areas had a long history with the HOLN that had been resumed with FAO. Together, WHO and FAO decided that the contentious issues of nutrition deserved an expert committee of their own. Reflecting the value administrators accorded nutritional policy, less than one year after WHO's establishment, the Joint FAO/WHO Expert Committee On Nutrition was set into motion. This new committee marked the marriage of WHO and FAO nutrition work. According to Aykroyd, "In practice the Nutrition Division of FAO and the smaller Nutrition Section of WHO work together almost as a single group."¹⁰⁸ The first meeting, in Geneva during October 1949, marked the first inter-organizational attempt to contemplate and plunge into malnutrition and hunger in the developing world. In the first and shortest report produced by the committee, twenty-four pages covered the major nutritional issues of the day, from goitre to "kwashiorkor", to nutritional status assessment.¹⁰⁹ The window for such discussion had been opened by a handful of researchers including Waterlow who had made recent, relevant, intriguing findings. Among the members of the committee was one prominent woman, Dr. Hazel K. Stiebeling who in the 1930s had divided food into nutritional groups,¹¹⁰ Brock of kwashiorkor fame, Terroine, a prominent French nutritionist, Sebrell, the influential director of the U.S. Public Health Service, and the newly appointed leaders of FAO's and WHO's nutrition departments, Aykroyd and Clements respectively. Importantly, this committee had no official powers over the nutritional components of WHO or FAO, rather, its role was solely as advisor to both organizations. Nevertheless, the expert committee definitely had the ear of the Directors-General of FAO and WHO, and in the case of the WHO, asked that Dr. Chisholm, WHO's Director-General, "prepare WHO programmes in nutrition,

¹⁰⁷Joint FAO/WHO Expert Committee On Nutrition, op. cit., note 84 above.

¹⁰⁸Aykroyd, op. cit., note 48 above, p. 239.

¹⁰⁹Joint FAO/WHO Expert Committee On Nutrition, op. cit., note 84 above.

¹¹⁰G. Hambidge, *The Story of FAO*, Princeton, D. Van Nostrand Company, Inc., 1955, p. 43.

to follow the committee's recommendations in so far as they apply."¹¹¹ This insistence draws attention to the formidable power and influence the committee had. The committee had the mighty position of offering advice that was expected to provide the focus and direction of WHO and FAO nutritional programmes.

In this first report, the committee expressed its view of the co-operative but independent functions of WHO's and FAO's nutritional agendas -- a point that was to become increasingly prominent during the early years of the committee. The committee asserted that WHO worked on nutrition issues for their impact on disease prevention and "maintenance of health" while FAO did so with nutritional emphasis on "the production, distribution, and consumption of food".¹¹² These apparently clear spheres of responsibility were quickly shifted as the committee went on to state that WHO sought to provide technical assistance while FAO felt that nutrition could not be categorized and that any nutritional programme would raise pertinent issues for FAO and WHO. This muddling of institutional priorities, while clouding broader ideological concerns of the two organizations, enabled the committee apparently to sequester WHO programmes from FAO's.¹¹³ As both agencies were new, the leadership at each was wary to pass on responsibility for certain issues to the other, and nutrition provided a pie of uncertain size to divide. According to Phillips, all the experts and the leadership were aware that "WHO would have liked to have had the whole of nutrition but it was a little hard to divorce it [nutrition] from agriculture and fisheries of course".¹¹⁴ Because the roles were so difficult to define, WHO and FAO conducted little nutritional work autonomously and much work in reluctant partnership. In practice the nutritional work of FAO and WHO rapidly became inextricably intertwined.

The committee evidently wanted WHO to address the medicalized aspects of nutrition, in particular, it called for studies of pellagra, "kwashiorkor", and goitre.¹¹⁵ "Kwashiorkor", according to the committee, was "one of the most widespread nutritional disorders in tropical and sub-tropical areas".¹¹⁶ On one hand, the tasks of cataloguing and surveying these diseases were given to WHO. FAO, on the other hand, arranged to train nutrition workers, organize nutrition courses, buttress

¹¹¹*Joint FAO/WHO Expert Committee On Nutrition*, op. cit., note 84 above, p. 3.

¹¹²*Ibid.*, pp. 4-5.

¹¹³*Ibid.*

¹¹⁴Ralph W. Phillips, interview, 8 September 1995.

¹¹⁵The term kwashiorkor was then used to describe the associated condition only in Africans. Years later it was adopted for diagnosis world-wide. See: Brock and Autret, op. cit., note 87 above.

¹¹⁶*Joint FAO/WHO Expert Committee On Nutrition*, op. cit., note 84 above, p. 15.

nutritional research, and promote milk as a weaning food.¹¹⁷ Since these assignments were agreed to by the heads of both organizations, it appeared that there was a wide gap between the work each organization was expected to conduct. Both organizations were asked, however, to expand their contacts in Africa, since every indicator pointed to widespread hunger there.¹¹⁸ Unicef hardly figured into the report except for a call to continue FAO collaboration for feeding programmes in war-torn European countries as well as Greece.¹¹⁹

One year and a half later, at the second meeting of the Joint FAO/WHO Expert Committee on Nutrition, it was clear that progress had been slow. A handful of consultants had been sent off to various destinations in the developing world to assist with issues such as national nutritional policy design (Egypt), supplementary feeding schemes (Central America), and nutrition education (Thailand). This work was conducted in addition to the broader information-gathering directives of both organizations. Nevertheless, the number of consultancies was low, reflecting the tiny structural and financial nature of WHO and FAO. The expert committee consultants themselves called on FAO to further emphasize "appropriate" technical assistance that would lead to applications.¹²⁰ By the same token, in the case of WHO they recognized that while nutritional "studies are important contributions to human welfare...their most important aspect-the practical application of this knowledge-remains to be developed and should form a basis of future programmes."¹²¹ The experts further hoped that consultants might begin addressing problems of kwashiorkor and infant feeding *where they occurred*, presumably not so much in the laboratory.¹²² This air of practicality permeated other regions of the committee's recommendations. The committee stressed, for example, that although it applauded training programmes geared toward nutrition workers, "critical evaluation" ought to be applied to methodology, subject, and "practical results."¹²³ To the committee members, the best method for nutritional improvement in a practical manner could come from so-called applied nutrition programmes. These programmes were expected to proceed in the

¹¹⁷Ibid., pp. 5-17.

¹¹⁸Ibid., p. 23.

¹¹⁹Ibid., p. 6. See also: *Report of the 4th Session of the Conference*, FAO, Washington, D.C., 1948, p. 44.

¹²⁰*Joint FAO/WHO Expert Committee on Nutrition Report on the Second Session, Rome, 10-17 April 1951*, Rome, FAO, November 1951, p. 18.

¹²¹Ibid.

¹²²Ibid.

¹²³Ibid., p. 20.

following fashion. Firstly, WHO and FAO would conduct surveys of areas to determine the best route of progress. Then successful projects or "demonstration areas" would be highlighted for the people to replicate in their own communities. These demonstration areas would take account of all factors -- from food habits to production -- in order to develop effective techniques for addressing nutritional problems.¹²⁴ There was a paradox in the undertaking of these applied nutrition programmes which the Joint FAO/WHO Expert Committee described. Nutritional workers, the committee asserted, should note that successful projects would lead to increased child survival and population growth, with consequently increased agricultural needs. Thus, in the committee's words, nutritional "'progress'...has been accompanied by deterioration in health, partly owing to replacement...of traditional nutritious foods by sophisticated foods of inferior value."¹²⁵ This warning was emblematic of two major thoughts that coursed through the minds of many in public health. Firstly, it was then in the nutritionists' power to produce marked "progress" in the lives of ignorant people afflicted by poverty. Secondly, the nutritionists in their potent role had to be careful with the "progress" they stirred, lest it be too harmful. This latter insight must have been reassuring to many nutrition workers who preferred directing their efforts towards nutritional research. Since nutritional development could be a veritable powder keg, it was best to continue studying problems until all aspects had been clarified. This predilection was not entirely rare. At a symposium in 1953, ^{one participant} ~~Platt~~ remarked that "People sometimes say that there is no point in having medical services to keep children alive so that they may later die of starvation...The only solution I can see is that we help people to have fewer children".¹²⁶ In other words, saving children's lives through nutritional improvement without providing birth control to mothers could spell more trouble for future generations. This sentiment ran contrary to popular conceptions of the role of science especially in terms of nutrition. Further, it was rarely discussed in other settings for decades to come.

Although the Joint FAO/WHO Expert Committees had no official powers within the sponsoring agencies, their influence was considerable and their composition reflected broader organizational and political nuances. Of the 1953 Joint FAO/WHO Expert Committee on Nutrition, for example, Scrimshaw noted that "there was a

¹²⁴Ibid., pp. 29-33.

¹²⁵Ibid., p. 31. The "traditional foods" were often thought of as legumes and other sources of protein, whereas the "sophisticated foods" were low-protein cereals.

¹²⁶Mr. Pirie, comment in B. S. Platt, 'Food and its production', contribution to Symposium on Development of Tropical and Sub-Tropical Countries, London, Arnold, 1953, 97-128, on p. 117.

disproportionate British influence...not inappropriately".¹²⁷ The gross majority of members, which changed committee to committee, had substantial interaction with WHO and FAO, though they were not full-time employees of either organization, except in rare cases. The major administrative input at such meetings came from the secretaries who were the respective heads of the nutrition divisions. At these meetings, the consultants had the opportunity to review past work and future plans and to make directed recommendations. These committees served well as a forum for the most distinguished nutritional issues in any given time period. Béhar believed that during the 1950s, "FAO/WHO expert committees were admired very much, and we took their word as the final word scientifically...[They] gave the scientific basis and guides for our work."¹²⁸ Scrimshaw, who served on most of these expert committees, believed that there was no greater concerted force in policy and ideology. He asserted that "The FAO/WHO expert committees brought together the best people that WHO and FAO could identify and brought the best knowledge that was available at that time and that was the forum for policy formation in at period." The issues were too large to be tackled by one administrator, thus Scrimshaw declared that

Certainly Jim [R. C.] Burgess [second head of the WHO Nutrition Section] did not independently attempt to make policy, he wasn't that kind of leader, he brought people together for consensus and so forth. So Jim would be guided by what the FAO/WHO expert committee and some consultants at that time suggested that he do. And the Nutrition Division in FAO wasn't that big either, it was much bigger than WHO but in that period the advisory committee really meant something, in the sense that decisions were made by an advisory group and not by bureaucrats-- today that's changed.¹²⁹

In no uncertain terms, scientists were elevated through these committees to influential policy positions. The ramifications of this hierarchy shall become clearer as we continue to explore this history.

Conferences

Although programmatically, FAO, WHO, and Unicef steered clear of work in the developing countries due to budgetary restraints and priorities in Europe, FAO

¹²⁷Nevin S. Scrimshaw, interview, 25 July 1995.

¹²⁸Moisés Béhar, interview, 29 December 1995.

¹²⁹Nevin S. Scrimshaw, interview, 18 July 1995.

made major strides in informing developing countries of the severity of malnutrition. Beginning as early as 1948, FAO collaborated with other organizations, including the Pan American Sanitary Bureau and WHO, to produce conferences on nutrition in the developing world. The first such conference in Latin America, held in Montevideo during July 1948, set a research-oriented tone for future conferences. The cornerstone of the Montevideo conference was a list of approximately seventy recommendations on topics ranging from survey data collection to governmental fertilizer policies and school lunch programmes. The broad recommendations were emblematic of the central dilemma nutritionists faced in the world's poorest countries: there were enormous problems and minimal resources. A decisive example of this doubly harmful combination centred around nutritional knowledge. The Montevideo conference, for example, recognized that nutritional knowledge in Latin America was vastly inadequate and recommended that major surveys be conducted in all sectors to illuminate the nutritional situation. However, the participants noted "that in all the countries in the region the resources necessary for this purpose, such as trained personnel, laboratory facilities, funds, etc., are insufficient."¹³⁰ Often it seemed that discussion was the one tangible result of such conferences,¹³¹ though Aykroyd found such conferences improved ties between FAO and governments and "put nutrition 'on the map' in member countries".¹³² Nonetheless, the abundant recommendations at these conferences generally demanded financial backing that was rarely forthcoming. When the Latin American conference recommended that "all Latin American countries establish services for providing primary school children with food, which may be supplied through breakfasts or lunches," there was no discussion of the means for accomplishing such a lofty goal.¹³³ The only goal that was noticeably attained was the arrangement of future conferences.

At the second Latin American nutrition conference, attended by luminaries like Scrimshaw and Waterlow in June 1950, a few notable changes occurred. WHO began

¹³⁰*Nutrition Conference*, Montevideo, July 1948, Montevideo, Uruguay, FAO, 1950, p. 175.

¹³¹This should not suggest that the constitutions of either FAO or WHO called for more than recommendations and advice. However, for FAO in particular, its central occupation was to raise the level of nutrition of the people of the world. For the shifting nature of FAO's constitution see: *Report of the Special Session of the Conference*, Washington, D.C., 3-11 November 1950, Washington, D.C., FAO, January 1951.

¹³²Aykroyd, *op. cit.*, note 38 above, p. 7.

¹³³*Nutrition Conference*, *op. cit.*, note 130 above, p. 185. School-feeding programmes as well as other supplementary food programmes had been highlighted by FAO since its inception as methods for significantly combating undernutrition. See: Wallace R. Aykroyd, 'Nutrition and poverty - a brief world survey', FAO Archives, 57.1D1, October 1946, p. 4.

collaboration with FAO on many aspects of nutritional problems in Latin America, particularly with an eye toward endemic goitre. Also, the conference more clearly articulated its *raison d'être*. Its organizers hoped to provide nutritional recommendations to governments for observance and to inspire educated people in these countries to take practical action. Lastly, the organizers expressed the hope that the research of Latin American nutrition experts – which had become more clearly defined during the previous two years – would be followed by programmes funded by the United Nations Program of Technical Assistance for Economic Development.¹³⁴ This last move further reinforced the emerging character of FAO and WHO as organizations providing advice and research but not programmes. The types of programmes sought fell along a broad spectrum of perceived treatments for malnutrition and hunger. They included the following: school feeding, industrial worker feeding, pregnant and nursing women feeding, and nutrition education.¹³⁵ Many of these types of projects were underway by the time of the third conference in 1953. Moreover, the conference advocated national nutrition programmes designed to raise nutritional levels of all populations in Latin America.

As far as the composition of these programmes, the conference stressed the possibility of joint work with FAO and Unicef on milk conservation programmes (dried skim milk production and distribution) as well as many school-based nutrition projects.¹³⁶ Protein supplies figured prominently into the nature of these projects.¹³⁷ According to protein experts Autret and van Veen, attendees of an international nutrition conference, "the ideal solution of this problem would be a generous milk supply to all infants and children" although this was impractical in many developing countries.¹³⁸ Autret and van Veen emphasized milk substitutes such as soy milk, fish flour and other high-protein mixtures as alternative solutions to the problem to which one British professor remarked most negatively. Countering the very assertion that

¹³⁴*Report of the Second Conference on Nutrition Problems in Latin America*, Rio de Janeiro, Brazil, 5-13 June 1950, Washington, D.C., FAO, August 1950, p. 2.

¹³⁵*Ibid.*

¹³⁶'Informe de la Tercera Conferencia sobre Los Problemas De Nutricion En La America Latina, Caracas, Venezuela, del 19 al 28 de octubre de 1953', sponsored by FAO and WHO, Washington, D.C., Oficina Sanitaria Panamericana, publicaciones Científicas no. 12, December 1954, pp. 2-5.

¹³⁷See: *Report of the Third Conference on Nutrition Problems in Latin America, Caracas, Venezuela, 19-28 October 1953*, Rome, FAO, FAO Nutrition Meetings Report Series no. 8, June 1954, pp. 20-27.

¹³⁸M. Autret and A. G. van Veen, 'Possible Sources of Proteins for Child Feeding in Underdeveloped Countries', in *Third International Congress of Nutrition, held in Amsterdam September 13th - 17th 1954*, Amsterdam, Stichting tot Wetenschappelijke Voorlichting op Voedingsgebied, reprinted from *Voeding*, 16, 1955, pp. 178-193, on p. 178.

there was a protein deficit, he stated, "It would be a great mistake...if those interested in human nutrition should for a moment imagine that supplementation of the native diet with some cheap protein food is the only effective answer to this tremendous problem of providing adequate food for large native populations."¹³⁹ The professor further implied that protein formulas were merely stop-gap, short-term measures while "the improving of native husbandry, the decreasing of wastage, the widening of education-especially of woman [sic]- and...the controlling of population increases, may...provide the only lasting solutions."¹⁴⁰ These conferences along with expert committee meetings formed the backbone of a research, programmatic, policy cycle. Conferences applauded efforts participants found useful which in turn led to increased funding. Expert committees thought through fundamental research problems, proposed future research projects and possible programmes. Administrators at FAO, WHO, and Unicef, were tuned to the outcomes of these conferences and committees and frequently carried out actions accordingly.

Dissecting FAO's Hunger Thinking: The Early-1950s

Rapid developments in FAO accompanied the agency's evolving nutritional interests. By 1953, FAO had transferred itself to more spacious headquarters in Rome where it had five major technical divisions: Agriculture, Economics, Fisheries, Forestry, and Nutrition as well as numerous branches. Although the move was cumbersome, for Aykroyd it provided the "opportunity for unburdening the organization of any unsuitable staff members".¹⁴¹ In spite of FAO's constitutional commitment to improving the nutritional status of the world population, the Nutrition Division was simply maintained as other components of the organization grew and expanded.¹⁴² FAO documentation does not convey how the department ostensibly responsible for FAO's central mission, nutrition, lost momentum. Phillips, who

¹³⁹Professor A. C. Frazer, comment in discussion of M. Autret and A. G. van Veen, 'Possible Sources of Proteins for Child Feeding in Underdeveloped Countries', in *Third International Congress of Nutrition, held in Amsterdam September 13th - 17th 1954*, Amsterdam, Stichting tot Wetenschappelijke Voorlichting op Voedingsgebied, reprinted from *Voeding*, 16, 1955, 178-193, on p. 193.

¹⁴⁰*Ibid.* Professor Frazer's remarks were clearly in the minority and had been for a couple of years. The FAO Conference in late 1953 had asked for focused attention on cheap protein-rich foods and encouraged collaboration between FAO, Unicef, and WHO to further this end. See: *Report of the 7th Session of The Conference 23 November - 11 December 1953*, Rome, FAO, March 1954, pp. 94-5, 120.

¹⁴¹Aykroyd, *op. cit.*, note 38 above, p. 3.

¹⁴²R. W. Phillips, *FAO: its origins, formation and evolution 1945-1981*, Rome, FAO, 1981.

eventually served as FAO's Deputy Director-General, believed that the importance accorded nutrition reflected the lack of support originating in developing countries. Phillips related:

Even though the name of the organization is [the] Food and Agriculture Organization...nutrition has always been sort of hidden away as one of the smaller units...in the early days of the field programme the nutrition people were always complaining that they were brought in at the end of a project rather than at the beginning and that was because countries themselves didn't have the motivation and the interest to put nutrition out front in their agriculture planning.¹⁴³

Perhaps more tellingly, Phillips told how he pushed the nutritionists "to get the lead out" and sell nutrition to the countries that needed it.¹⁴⁴ FAO allocations to its individual divisions were computed based on country requests and such requests for nutritional aid were sparse enough to elicit concern from the Joint FAO/WHO Expert Committee on Nutrition late in 1954. The committee's report confirms Phillips' allegations and also indicated that countries were hesitant to file requests with the Nutrition Division after the division failed to meet its obligations^{to the countries} in 1953.¹⁴⁵

Although each division hypothetically worked on nutritional concerns, their investigations generally did not take into account strictly nutritional science, such as the work of the Nutrition Division. Previous programmes had concentrated on raw food supplies and not on nutritional content; this was a tradition that was difficult to break. Among the central concerns of the Agriculture Division, which rapidly came to command roughly half of the organization's resources, were animal disease control and animal production, plant development, and land and water use. These were far more tangible needs in developing countries' agriculture and health ministries than nutrition alone. The Economics Division concentrated on statistical compilation and interpretation of indicators related to the other divisions. Along with Agriculture, Economics had the lion's share of support and influence in FAO.¹⁴⁶ The Fisheries Division concerned itself with all aspects of fish and fish products. The Forestry Division sought rational forestry management policies.

¹⁴³Ralph W. Phillips, interview, 8 September 1995.

¹⁴⁴Ibid.

¹⁴⁵*Joint FAO/WHO Expert Committee On Nutrition: Report on the Fourth Session*, Rome, FAO, FAO Nutrition Meetings Report Series no. 9, July 1955, p. 19.

¹⁴⁶Ralph W. Phillips, interview, 8 September 1995.

The Nutrition Division worked on many projects -- from food surveys to nutrition education. Aykroyd believed that their most important task was "to ensure that FAO does not forget its own parent [i.e. nutrition]" and in this vein "to keep the other Divisions and Member Governments aware of it and its implications."¹⁴⁷ The content of a brochure printed in 1954 entitled *The Mission of FAO* suggested that perhaps the Nutrition Division had been failing in its efforts to keep nutrition on the agenda. Cold War quasi-political writing propounded that with expanded and improved radio and motion picture, "great numbers of people who live wretchedly have realized the contrast between their own conditions and those of the better-off countries. This makes it psychologically unwise and politically dangerous not to do everything possible to improve their standards of living."¹⁴⁸ The pamphlet neglected to mention the work of Aykroyd's division, and more impressively, failed to state specifically that FAO's premiere purpose -- according to its constitution the raising of nutritional levels -- remained its supreme objective. Rather, the authors cited "action to increase the world's food supplies" as being of "imperative importance" and identified the fields of "agriculture, forestry, and fisheries" as the regions in which this aim could be advanced.¹⁴⁹ It seemed to be no editorial error that these fields corresponded to three out of FAO's five divisions and excluded nutrition.

In spite of the low organizational enthusiasm for the Nutrition Division, Aykroyd managed to conduct numerous activities effectively. Aykroyd's central concerns were with scientific analysis since only this could provide the necessary foundation for serious field work. When FAO nutrition expert Reh complained that there was too little emphasis on field work at INCAP, Aykroyd's response summed up his proclivities. He wrote:

Unquestionably there is need for further fundamental research on problems of nutrition in underdeveloped countries. Satisfactory practical programs must be based on adequate scientific knowledge. Unless active research is being carried out, the field worker is sometimes in danger of following an approach to practical problems which is scientifically speaking obsolete.¹⁵⁰

¹⁴⁷Aykroyd, op. cit., note 48 above, p. 238.

¹⁴⁸*The World Food Problem: The Mission of FAO*, 2nd ed., Rome, FAO, March 1954, p. 2.

¹⁴⁹*Ibid.*, p. 1.

¹⁵⁰W. R. Aykroyd, letter to Emma Reh, 30 October 1950, FAO Archives, 57.1A5.

Aykroyd's interest in scientific "certainties" undoubtedly fuelled his drive for ongoing food survey and composition activities, the breadth of which had been stunted for years. In 1953 Aykroyd noted that until then, only proteins and fats had been considered for appraisals -- probably the result of the multi-institutional focus on protein.¹⁵¹ One year later, likely inspired by Aykroyd's life-long interest in beriberi, the same report included micronutrients such as vitamins A, C, B₁, riboflavin, niacin, and iron. This report led Aykroyd to elucidate how these food composition tables could help in the fight against hunger. After explaining how such factors were of central importance in human diets, he continued writing as though national diets could be changed as easily as individual diets: "If careful judgment is exercised the present tables can, however, be used to obtain valuable information which can be applied in measures to make good deficiencies in national diets."¹⁵² FAO had a macro-perspective on hunger throughout the world and when characterizations were made of the hungry, they fell squarely on the contents of "national diets." FAO's approach resonated with the essence of the HOLN nutritional surveys and serious laboratory research, the usefulness of which was questioned by some.

Two women who wrote a pragmatic psychological study of food habits in 1952 remarked critically that cultural, circumstantial, and personal discrepancies in food choice

become more important in the light of the League of Nations' assumption that the allocation of food budgets is a matter of intelligent choices. 'Intelligent' in respect to what?-the values of one's family, one's class, one's caste, the neighborhood, the nation, or something more inclusive than all of these? It is true that these discrepancies constantly tend to disappear, but the evidence here indicates that **there is a serious difference at present between local dietary practice and scientific theory.** (emphasis mine)¹⁵³

The authors continued to question, with remarkable insight, the troubling and tempestuous relationship between nutritional scientists and ordinary people.

¹⁵¹C. Chatfield, *Food Composition Tables - for international use*, 1st ed., Rome, FAO Nutritional Studies no. 3, 1953, p. iii.

¹⁵²C. Chatfield, *Food Composition Tables - Minerals and Vitamins for international use*, 2nd ed., Rome, FAO Nutritional Studies no. 11, 1954, p. iii.

¹⁵³Margaret Cussler and May L. De Give, *Twixt The Cup And The Lip: Psychological and Socio-Cultural Factors Affecting Food Habits*, New York, Twayne Publishers, 1952, pp. 20-21. I tried in vain to locate biographical information on Cussler and De Give which might have shed more light on their striking insights.

According to the authors, the "encyclical authority [of nutritional science]...endows certain foods with the same kind of *mana*, or special supernatural power, as was attributed to certain articles of diet in primitive societies. Other food items are as rigidly tabooed."¹⁵⁴ This type of criticism was rare for its scathing nature and brutal commentary on the essence of international health organizations' nutritional ideology.

A few sites of concentration for FAO efforts, right from the time of Orr's departure, were the rice-eating countries of Asia where the Nutrition Division believed that it could play a major role in improving nutritional status and warding off beriberi. At times, however, it seemed FAO's primary interest rested with expanding work for scientists, not the diets of nations. In reference to beriberi and its history, FAO stated that "The whole problem needs re-examination in the light of modern knowledge and the experience gained in certain countries."¹⁵⁵ Thus, as with many disorders vitaminic and otherwise

... policy makers and others felt a profound need for more research, newer examinations, and more advanced studies. Their training demanded scientific discipline, not necessarily long-term development strategies or community health work.

Fundamental questions about the efficacy and relevance of nutritionists persisted. In the FAO report on rice, the writers commented that "The prospect that practical application will be given to the findings and recommendations of nutrition workers is more promising than [sic] it has been in the past."¹⁵⁶ There was a pronounced sense that science was not readily translated into pragmatic applications. For example, programmes to encourage the consumption of brown rice over white polished rice, thereby preserving its protective qualities and thiamine content, had been troubled for years. In the words of two critics, "Food by fiat, eating by edict, was not so easy as it looked."¹⁵⁷ Toward the end of the FAO rice report, the committee's opinion of research seemed reversed, and it "declared that the time has come for a new and vigorous campaign to raise nutritional levels in rice-eating countries. How can this best be organized and along what lines should it progress?"¹⁵⁸ The unexpected answer, especially given the earlier leaning toward "practical programs" was: "In the

¹⁵⁴Ibid., p. 21.

¹⁵⁵*Rice and Rice Diets*, Washington, D.C., FAO Nutritional Studies no. 1, 1948, p. 6.

¹⁵⁶Ibid., p. 7.

¹⁵⁷Cussler and De Give, op. cit., note 153 above, p. 164. For a description of the hypocritical food habits of consumers and producers see: P. R. Cannon, *Recent Advances in Nutrition with Particular Reference to Protein Metabolism*, Lawrence, Kansas, University of Kansas Press, 1950, pp. 3-9.

¹⁵⁸*Rice and Rice Diets*, op. cit., note 155 above, p. 49.

first place, more research is needed. It has been pointed out again and again in this survey that existing knowledge is inadequate at many points...There is clearly need for more trained nutrition research workers, units and laboratories in rice-eating areas in general."¹⁵⁹ This final remark suggested that while it was openly recognized that research was not leading to the types of applications desired, more research would do so.

In the view of FAO and WHO, programmes that benefited people would naturally radiate outward from a centre built upon solid scientific research. Although this ideology stirred confusion about the purpose of researchers, especially when tangible results were rarely seen, this tactical approach worked well in rice-eating countries compared to African nations where vast inadequacies were the chief concern. The types of research that might be applied to Africa, frequently used Europe as their subject. One hefty tome published in 1950 studied the physiology of human starvation in-depth and included an experiment recreating famine-like conditions. The study, however, was designed with Europe's circumstances in mind, not Africa's.¹⁶⁰

In order to further solidify its place in the making of public health nutritional research and policies, FAO aggrandized the position of the "nutrition expert". FAO created a heroic image, not far from Paul de Kruif's *Hunger Fighters*, for the expert nutrition worker.¹⁶¹ This development seeped into FAO publications subtly. In Greece, one FAO consultant pointed out how the expert approach was effective in government dealings:

It was, in fact, necessary to do everything possible to create an awareness of the problems of nutrition and of the need for specialized knowledge in attacking them. This was not easy, particularly since such problems had previously often been dealt with by people lacking expert knowledge. A certain aggressiveness had to be exhibited at times. Instead of waiting for governmental and other agencies to recognize the need for help and to ask for her services, the nutritionist

¹⁵⁹Outside of increased food distribution the most pressing needs for nutritional improvement were "machinery and personnel...to develop practical nutrition programs. National nutrition organization and committees can greatly assist such development." *Rice and Rice Diets*, op. cit., note 155 above, p. 49.

¹⁶⁰A. Keys, J. Brozek, J. Henschel, A. O. Mickelsen, and H. L. Taylor, *The Biology of Human Starvation*, Minneapolis, University of Minnesota Press, 1950. Nutrition problems persisted in Europe well into the following decade and were mentioned at FAO/WHO symposia throughout the 1950s. See, for example: *Report of the Symposium on Education and Training in Nutrition in Europe*, 1960, Rome, FAO, FAO Nutrition Meetings Report Series no. 26.

¹⁶¹See: Paul de Kruif, *Hunger Fighters*, New York, Harcourt, Brace and Company, 1928.

followed the method of offering them for any appropriate task, large or small. In this way the value of an expert approach could often be demonstrated, and request for help soon became numerous.¹⁶²

The nutrition expert was placed on high as the ultimate hunger problem-solver.¹⁶³ Any nutritional problem a country had could be solved with substantive advice from a UN expert, though Aykroyd warned that the notion "to get as many technicians as possible into the field to advise governments directly is misguided".¹⁶⁴ FAO vaguely reported in 1953 that governments receiving FAO advice were increasingly willing to co-operate "in applying the required data."¹⁶⁵ FAO and WHO defined the protocol for their advisers in certain terms: they would provide advice only when a member country, preferably a co-operative one, requested it. The job of the experts, in this light, was not to blaze trails through malnourished areas and spread the gospel of their solutions. To the contrary, they would stay put in Rome or Geneva until they were needed and wanted.

FAO attempted to respond with expertise to all requests which originated in member countries. On the African continent, however, FAO meekly reported that the progress of its experts had been slow and in 1953 admitted that "the resources of FAO cannot be equal to the requirements of all areas of Africa where FAO's assistance has been sought."¹⁶⁶ The first years of idealism were wearing thin, and with this evolution, FAO was coming to see that hunger problems loomed larger than the solutions. Aykroyd couched the situation in optimistic terms and drew a parallel between the vigorous work of FAO and the story of David and Goliath. "David did kill Goliath,"

¹⁶²A. G. Tsongas, *Nutrition Work In Greece*, FAO Nutritional Studies no. 7, Rome, FAO, 1951, p. 20. Unicef's aid to post-war rehabilitation was enormous, providing supplies of supplementary food to over a million children each day in Greece up through 1951. (pp. 36-7)

¹⁶³A later FAO publication designed for experts in FAO's Nutrition Division provided the following fitting definition for the nutrition expert: "Experts must be imbued with faith, the spirit of self-sacrifice, and, in addition to their technical qualifications have the qualities of pioneers and be able to work under adverse circumstances. Experts are sent to young and poor countries to help them reach a higher technical and economic level from which vantage point they will be able to acquire and enjoy all the facilities of the industrialized countries. When that day dawns, experts should be ready to leave, happy that their mission has been accomplished." M. Autret, H. Teulon, M. de Crescenzo, *Guide for the use of Experts of the Nutrition Division of FAO*, Rome, February 1964, 64/B/11066.p, p. 80.

¹⁶⁴Aykroyd, op. cit., note 38 above, p. 2.

¹⁶⁵*Report of the Council of FAO, Seventeenth Session, 15-24 June 1953*. Rome, FAO, 1953, pp. 7-8.

¹⁶⁶*Ibid.*, p. 6.

wrote Aykroyd, "but the issue of the struggle was undecided when he was choosing smooth stones out of the brook."¹⁶⁷

Unicef and Technical Advice

Countries and ministries of health were not the only bodies from which FAO and WHO hoped to receive requests. Both agencies also looked forward to providing technical advice to Unicef. When Aykroyd realized early in 1950 that Unicef would continue to exist for at least a few more years, he wrote to McDougall that relations should be formalized. Specifically, this meant that "If Unicef is developing what it calls a nutrition program in any country, arrangements should be made for FAO to provide (at Unicef expense) technical experts who can advise...and keep it on sound lines."¹⁶⁸ Aykroyd believed that Unicef's nutrition projects, particularly in supplementary feeding, were grossly misguided and felt that FAO deserved inclusion. The present arrangements were unsuitable to Aykroyd since Unicef was making all of its own plans with governments and inviting FAO to observe only after projects were solidified.¹⁶⁹ At a presentation to the Unicef Executive Board in 1950, he toted the FAO view and pushed for joint procedures:

We [at FAO] feel that wherever and whenever Unicef is undertaking a program in the field of child and maternal nutrition, that program should be linked with FAO activities in the country...Hitherto FAO/Unicef relations have been on an informal and friendly basis. We think, however, that in order to ensure the coordination which is needed, somewhat more definite arrangements are required.¹⁷⁰

Aykroyd's call for co-ordination seemed a logical requirement since Unicef lacked technical staff and wished for its projects, nutrition especially, to be aligned with scientific norms. The catch -- that FAO expected Unicef to pay for the experts provided -- irritated Unicef considerably. According to Aykroyd, the Unicef Executive Board and Pate were reluctant to undertake such a financial arrangement.¹⁷¹

¹⁶⁷Aykroyd, *op. cit.*, note 48 above, p. 243.

¹⁶⁸W. R. Aykroyd, letter to F. L. McDougall, 28 July 1950, FAO Archives, 57.1A6.

¹⁶⁹*Ibid.*

¹⁷⁰W. R. Aykroyd, 'Statement to the Executive Board, Unicef', 28 November 1950, FAO Archives, RG 57.1 series H1, p. 5.

¹⁷¹W. R. Aykroyd, letter to Acting Director-General, 'Report on meeting of the Executive Board of Unicef, Lake Success, November 27-28, 1950', 30 November 1950, FAO Archives, 57.1C1, p. 2. Some of Unicef's hesitation probably arose from similar problems with WHO's scrutiny of Unicef

Unicef eventually succumbed to pressure and, by joint agreement with WHO and FAO, the Unicef Executive Board prescribed its staff to seek technical advice and approval from FAO and WHO on any project it wished to implement.¹⁷² The consequent ladder of approval created problems and frustrations for Unicef as well as FAO.¹⁷³ According to Phillips, the problems were essentially administrative insofar as Unicef had different programming procedure from FAO. FAO had a biannual funding programme which was difficult to co-ordinate with Unicef's approach. Phillips noted that "Unicef was often running with a project before FAO could catch up with its input."¹⁷⁴ From Heyward's perspective at Unicef, the issue had more to do with autonomy and competence than budget deadlines. Heyward asserted that FAO continually manipulated Unicef to provide FAO with funds for its technical staff. Not only did projects require technical approval, but FAO technicians could require that FAO technical staff be hired for project implementation. This loophole provided the impetus for controversy. Furthermore, Unicef found itself hopelessly behind in project implementation because it would take months for a project to receive approval from FAO divisions, then, if technical staff were required, many more months were needed to position them in the project.¹⁷⁵

In spite of Unicef's serious concerns with FAO's advice, FAO's influence, particularly in the 1950s, remained substantial, especially after Rajchmann's departure from Unicef's Executive Board in 1953. Rajchmann, an influential advocate as Chairman of the Board, had been one of the masters of Unicef's policy. He had encouraged the Board to approve projects for milk conservation and distribution in developing countries. Although his considerable field experience had led him to doubt the utility of other more complex programmes in developing countries, he believed that milk could make a difference. This simple treatment dovetailed nicely with Pate's pragmatic ideology.¹⁷⁶ During the mid-1950s, Unicef relied more heavily on FAO's and WHO's technical advice. Following the sweeping tenor of protein interest set by

health projects. Aykroyd believed, however, that this conflict had been largely resolved, "at any rate on paper." (p. 2.)

¹⁷²E. J. R. Heyward, interview, 12 September 1995.

¹⁷³WHO had similar problems, which did not involve nutrition issues, with Unicef until 1957. E. J. R. Heyward, *op. cit.*, note 70 above, p. 6.

¹⁷⁴Ralph W. Phillips, interview, 8 September 1995.

¹⁷⁵E. J. R. Heyward, interviews, New York, 5 May 1995 and 12 September 1995.

¹⁷⁶*Ibid.* It has been alternatively submitted that Rajchmann approached nutrition work in the developing countries very cautiously, since he feared the Unicef's potential for positive impact was tiny. See: Al Davidson, interview conducted by John Charnow, 1 November 1983, Unicef Archives, interview file, p. 11.

FAO and WHO, in 1953 Pate looked favourably toward the promotion of fish flour, vegetable milk, and other products to treat malnutrition in underdeveloped countries. Before progressing with newer programmes, Pate would request further broad advice from FAO.¹⁷⁷

During the early-1950s, much of the technical advice FAO provided encompassed five major areas: reducing crop waste and losses, increasing agricultural yield, extending land utilization, improving rural working conditions, and raising nutritional levels and standards of living.¹⁷⁸ In this latter area, FAO's work focused on a few key areas: milk conservation, home economics, and high-protein foods. WHO worked with FAO to produce a booklet on milk pasteurization in 1953.¹⁷⁹ Similar work was carried out with Unicef and included research on locally available protective foods for children. The strongest nutritional collaboration among the three organizations, at least during these early years, involved FAO and Unicef. In 1953 they began work on a soybean milk plant in Indonesia and fish flour in several countries.¹⁸⁰ The home economics programme essentially called for greater teaching of a melange of subjects -- from fostering modern hygienic conditions in the home to improving women's status.¹⁸¹ Notably, the bulk of FAO's technical assistance in developing countries came from its technical assistance programme, which was responsible for fellowships and consultancies.¹⁸²

The Third Joint FAO/WHO Expert Committee On Nutrition

Marking an important shift in focus, the Joint FAO/WHO Expert Committee met for its third session in the Gambia. The move represented the newly excited focus on nutrition in developing countries, particularly in Africa, which had grown out of the Brock-Autret report on kwashiorkor. The consultants invited to formulate the third report reflected the continuity of the committee as well as the weight accorded a few chosen scientists. Between the first and third sessions, the only individuals to remain on the Committee from FAO were Aykroyd and V. N. Patwardhan, the Director of Nutrition Research Laboratories in Coonoor, India. Representing WHO, Dr. J. F.

¹⁷⁷Executive Director General Progress Report', September 1953, E/ICEF/236.

¹⁷⁸*Report of the Council of FAO*, op. cit., note 165 above, p. 13.

¹⁷⁹See: *Milk pasteurization: planning, plant operation and control*, Rome and Geneva, FAO AND WHO, 1953.

¹⁸⁰*Report of the Council of FAO*, op. cit., note 165 above, p. 23.

¹⁸¹*Ibid.*, p. 24.

¹⁸²*Ibid.*, pp. 24-5.

Brock remained as did the recently resigned chief of the WHO Nutrition Section, Clements. They were joined by Platt of the LSHTM and the MRC, Dr. Trowell of the Uganda Medical Service, Waterlow, by then a senior research fellow at University College of the West Indies, and Autret. The latter list displays clearly how heavily WHO weighted African nutrition problems, especially kwashiorkor. Brock and Autret had written their groundbreaking tome on the subject, Trowell had avidly pursued kwashiorkor since approximately 1937 when he called it "infantile pellagra",¹⁸³ Waterlow had been following up his work on fatty liver disease (by then identified as kwashiorkor). Platt's interest in African malnutrition had long been at the centre of his research, most notably in the Nyasaland Field Survey and colonial malnutrition work. It therefore came as a surprise to no one that the committee "while not neglecting the broader aspects of the problem of under- and mal- nutrition in mothers and children, concentrated its attention on protein deficiency and its effect on child health."¹⁸⁴ The unwieldy phrase "protein deficiency and its effect on child health" was nothing but a euphemism for kwashiorkor and the committee placed both under the broader heading of "protein malnutrition". In a decisive move to magnify the issue of protein malnutrition as it related only to children, the committee stated that "Malnutrition in mothers has been considered rather as a factor contributing to malnutrition in children than as a particular problem in itself."¹⁸⁵ Evidently, malnutrition in adults, mothers especially, was to be couched in terms of the deleterious effect on children. While a nutritional emphasis on children could be traced through the recent history of war-time Europe, there had been considerable weight given to the importance of an adequately nourished *population*. The committee's decision showed their peaked interest in one exciting and interesting malady, namely kwashiorkor, and their accompanying heightened concern for the plight of children. According to the committee, "In the fields of medicine, public health, and medical research, attention has recently shifted from disease due to deficiency of vitamins and minerals to what can provisionally be called protein malnutrition."¹⁸⁶ The committee did not explain the aetiology of this change -- such as increased prevalence -- but rather justified its corresponding shift with the increased nutritional interest in all medical fields.

¹⁸³See: H. C. Trowell, 'Pellagra in African children', *Archives of Disease in Childhood*, 1937, **12**, p. 193.

¹⁸⁴*Joint FAO/WHO Expert Committee On Nutrition*, op. cit., note 101 above, p. 4.

¹⁸⁵*Ibid.*

¹⁸⁶*Ibid.*, p. 5.

In addition to kwashiorkor, the report mentioned marasmus, which it delineated from kwashiorkor by explaining that it was severe undernutrition. The key difference was that marasmus occurred after prolonged carbohydrate and fat deprivation (in addition to protein) whereas protein malnutrition involved only a lack of adequate protein. Although the committee highlighted these distinctions, it backtracked on the stiff headings and explained that combinations of protein malnutrition and undernutrition were common throughout the "underdeveloped nations". Kwashiorkor stood apart from marasmus, characterized by inanition, during its initial phases since an apparently well-fed child could be afflicted. The committee was concerned that hunger and undernutrition, which were easily identifiable, would overshadow kwashiorkor and therefore stressed the need to place kwashiorkor and other malnutritional diseases in the diagnostic nutritional lexicon.¹⁸⁷

In a peculiarly curt manner, the committee suggested that undernutrition and protein malnutrition were caused by four factors: food supply, population growth, economics, and ignorance.¹⁸⁸ Keeping the focus on protein, the committee recommended high-protein formulas for the treatment of protein malnutrition, and dietetic changes for its prevention. Overall nutritional improvements could best be made through increased production of productive foods and particular interest should be placed in exploiting protein production.¹⁸⁹ By sequestering protein malnutrition from undernutrition, the committee effectively produced a focused recipe for research and programmes. Since the causal factors of undernutrition and malnutrition were tremendous and unmanageable, the committee decided to focus on areas where it believed progress could be made. Thus, out of its five recommendations to FAO and WHO, four directly mentioned protein malnutrition and none mentioned undernutrition or marasmus by name.¹⁹⁰ Unicef was asked to work with FAO and WHO on government requests for protein improvement projects.

The break this committee made from previous work by dwelling on protein-related issues was profound and influential. The meeting itself generated enough attention to deserve a press release from the UN Department of Public Information which optimistically suggested that with continued progress, the incidence of protein

¹⁸⁷Ibid., pp. 6-7.

¹⁸⁸Ibid., pp. 8-10.

¹⁸⁹Ibid., p. 10-17, 25. Protein production could be boosted, for example, by interbreeding goats, improvement of pulse and cereal storage, and fish pond culture. (pp. 26-27)

¹⁹⁰Ibid., pp. 19-20.

malnutrition could "be reduced to relative insignificance within ten or twenty years."¹⁹¹ For the public, then, the issue was sufficiently broad to warrant attention. More strikingly, for doctors and nutritionists protein was capturing interest in a way in which hunger and undernutrition had not, and the committee worked to reinforce and build on it. The basis for this development related to the medicalization of hunger. Any nutrition worker could look at a picture of a starving child, make a diagnosis, and prescribe a possible regimen. By the same token, a child suffering from undernutrition-induced stunted growth presented more subtle, but superficially mundane symptoms that a trained professional could also locate. Kwashiorkor, on the other hand, had **inspired** nutrition workers. Its character was considerably different from any other hunger-related illness they had previously encountered. There were intense physiological and biological changes that occurred in an afflicted child -- changes which could be measured, explored, and otherwise examined. It was not simply a matter of investigating a child's weight-for-age as was the case for undernutrition. Rather, it seemed that chemical changes could hypothetically be tracked and elaborate techniques for diagnosing the disease could be invented. Kwashiorkor, in many senses, was the state-of-the-art hunger disease. Its character and alleged prevalence promised ongoing interest from the scientific community.

Resonances of Protein and Population

The interest in protein malnutrition of the Joint FAO/WHO Expert Committee rapidly permeated discussion of nutrition throughout the world. The Nutrition Committee for South and East Asia, inspired by the expert committee's report, expressed extensive concern for protein malnutrition. Although the committee could not confirm the incidence of protein malnutrition and felt that the prevalent form of kwashiorkor differed from the African version, it agreed that protein malnutrition demanded action. It also stressed, independently, the need for safe and adequate weaning methods and the treatment of other deficiency diseases.¹⁹²

Far less discussed than the means for coping with malnutrition were the reasons for addressing it. Frequently, it seemed that scientists were interested in the problem because of the inherent scientific value of malnutrition. Broadly stated,

¹⁹¹"Protein Malnutrition -- "a problem of fundamental importance", 1954, UN Department of Public Information, E/11145, FAO/701, UN Archives, CF9D 79, folder A023.

¹⁹²*Report of the Nutrition Committee for South and East Asia: third meeting, Bandung, Indonesia, 23-30 June 1953*, Rome, FAO, November 1953, FAO Nutrition Meetings Report Series no. 6, pp. 1-16.

however, three central motives appeared for nutritional development: altruism, an expansion of raw materials and opening of new markets, and political stability.¹⁹³ Increasingly, the primary methods for obtaining these formidable ends differed immensely, and newer research sparked broader thought. Platt, who was playing an influential role on expert committees and in the nutritional community, believed that small demonstration projects might be one key to development, a view shared by many expert committee on nutrition colleagues. However, Platt further believed that nutritional work should be brought down to the lowest common denominator -- namely, the family -- in order to produce effective programmes.¹⁹⁴ Platt played a delicate and extremely important role in injecting Western medical knowledge coloured by international exposure into the perspective of committees. In the view of Scrimshaw, one of his colleagues, "Platt trained people from all over the world particularly from Africa and was one of the people who had a very good international nutritional perspective, probably more than anybody in the U.S. at the time."¹⁹⁵ Contrary to much of the research-oriented rhetoric that emanated from FAO and WHO meetings that Platt attended, in one speech he suggested that sufficient evidence had been collated by 1953 to justify increased food supplies and improved nutritional training. While Platt's position was not controversial, his articulation for action was unusual. Although Platt supported research, particularly nutritional surveys, he believed that they should automatically be tied to follow-up pragmatic projects, a view rarely trumpeted by many of his scientific colleagues. Platt believed that the 'whats' were known -- what to eat and what to grow -- but the 'hows' -- namely how to improve food supplies -- remained shrouded.¹⁹⁶ To complicate matters further, racism lingered in the air breathed by the public and the nutritionists, frequently in the form of tales of African's acute laziness or another people's moronic behaviour. Platt believed this myth to be sufficiently significant to deserve public explanation. He empirically demonstrated that far from being lazy, Africans worked harder (and burned more calories) than Europeans.¹⁹⁷ Nevertheless, tales of ignorance were favourites at nutritional meetings for they highlighted the difficulty in changing customs and placed their work high on a pedestal. One participant in a symposium highlighted the paternalistic way in which many viewed their work in the developing countries when

¹⁹³B. S. Platt, 'Food and its production', contribution to Symposium on Development of Tropical and Sub-Tropical Countries, London, Arnold, 1953, 97-128, p. 97.

¹⁹⁴*Ibid.*, pp. 98, 104.

¹⁹⁵Nevin S. Scrimshaw, interview, 25 July 1995.

¹⁹⁶Pirie, *op. cit.*, note 193 above, pp. 98-99.

¹⁹⁷*Ibid.*, p. 102.

he cited a plant pathologist who introduced healthy potatoes in China only to find the Chinese weeded them out since they appeared different from the norm.¹⁹⁸ This arrogant sense of knowing what was best for native peoples was deeply embedded in the character of many early development projects. Nutrition continued to be seen as one aspect of the white man's burden in developing countries. While it would be highly subjective and difficult to investigate how these attitudes influenced and transformed nutritional policies, it is important to note that they were common and formed part of the complex calculus of nutritional thought.

In 1953, FAO, WHO, and the Josiah Macy Jr. Foundation sponsored an unusual protein malnutrition conference in Jamaica. Because protein malnutrition was garnering such wide public health attention and differences in clinical interpretation of the disease persisted, Aykroyd, R. C. Burgess, Clements, Waterlow, and Dr. Fremont-Smith of the Macy Foundation called for the conference.¹⁹⁹ The casual conference format and the conference publication -- a nearly verbatim record of the proceedings-- provide a superb record of contemporary thinking on nutrition in relation to protein. At issue was an accurate description and classification for kwashiorkor. Waterlow pointed out that clinicians knew kwashiorkor when they saw it, but could not describe it precisely. Thus, the topic of the conference was as semantic as it was scientific: terms and clinical indicators had to be agreed on. Early in the conference, a few members were sceptical about even delineating protein malnutrition from chronic hunger or starvation. One tête-à-tête proceeded as follows:

Waterlow:...But will you accept protein depletion as the end result, however it is brought about?

Gyorgy: I don't accept it.

Rao: But, Dr Waterlow, do you include the effect of a low intake of protein also?

Waterlow: I am saying that a low intake either of protein or of factors influencing protein synthesis will lead to an organism depleted of protein.

Gyorgy: I can't accept that. What do you do in complete starvation? Would you not lose protein too?²⁰⁰

¹⁹⁸Platt, op. cit., note 126 above, p. 116.

¹⁹⁹J. C. Waterlow (ed), *Protein Malnutrition - Proceedings of a conference in Jamaica 1953, sponsored by FAO WHO and Josiah Macy Jr. Foundation, New York, Cambridge, University Press, 1953*, pp. viii-xiii. Clements, in particular, had long been an advocate for research on protein malnutrition. R. C. Burgess, interview, 12 July 1996.

²⁰⁰*Ibid.*, p. 5.

Waterlow explained to the conference participants that the endgame for his laboratory work and that of others was to cure and prevent kwashiorkor. Acknowledging that kwashiorkor was one acute type of protein malnutrition, he justified their work on it by stating that work on the seriously ill baby would be "the quickest way to the heart of the problem."²⁰¹ According to Waterlow, he and other clinicians were not disinterested in less severe forms of malnutrition, they just wanted to find the best solution as quickly as possible. As the four-session conference moved on, conflict and uncertainty characterized the proceedings. Dr. Rao of Bombay questioned all previous terminology defining marasmus, kwashiorkor, marasmic kwashiorkor, and protein malnutrition. He called such labels a "compromise" that emerged from the Joint Expert Committee meeting in the Gambia. Rao explained the confusion: "We are still not quite sure what is malnutrition or generalized undernutrition, what is kwashiorkor, whether one is the beginning and the other is the end. That is why we again come back and are begging the question once again."²⁰² The conference hardly cleared the air on this matter. R. F. A. Dean, who had conducted outstanding research in Uganda for the MRC, refused to use the term 'protein malnutrition' throughout the proceedings.²⁰³

The focus of Dean's work in Uganda, the use of vegetable proteins in the treatment of kwashiorkor, drew substantial attention, as did the broader issue of treatment regimens. In general, the participants agreed that high-protein was the key to treatment and that locally available sources should be exploited. Gopalan, an Indian, stressed in particular the nature of kwashiorkor's incidence in rural settings, far from hospitals that were providing technically advance aid which included the questionable use of blood transfusions.²⁰⁴ He and Cicely Williams emphasized simplicity over all other considerations.²⁰⁵ Williams had continued to exert considerable influence over nutritional policies at the UN agencies, as evidenced in high-level agency correspondence. In a letter from Aykroyd to Heyward, then the Unicef Deputy Director, Aykroyd enclosed a copy of a Williams article and applauded

²⁰¹Ibid., pp. 1-2.

²⁰²Ibid., p. 14.

²⁰³Ibid., p. 141.

²⁰⁴Gopalan was then an increasingly prominent nutritionist on the international scene. After receiving his M.D. from Madras Medical College, he was inspired by the Bengal Famine to pass up a lucrative medical practice in favour of a career in nutrition. From 1946 to 1949 he worked at the MRC as the first Nuffield Foundation Fellow from India. At the time of the conference in Jamaica, he was a Rockefeller Foundation Fellow. C. Gopalan, biodata of C. Gopalan, 1996, Gopalan personal collection.

²⁰⁵Ibid., pp. 197, 202.

her emphasis on nutritional education. Aykroyd felt, however, that Williams had exaggerated the potential impact of local educational programmes and overlooked food scarcity and poverty since, based on his experience, "attempts to teach people better habits of diet were discouraging because the response tended to be 'We cannot feed our children and ourselves properly because we have no means of obtaining the right foods'."²⁰⁶ In spite of his reservations, Aykroyd had marked respect for Williams' thinking as he concluded, "I think that Cicely Williams's article will repay careful study on the part of those of us who are trying to work our policies and programs for improving child nutrition in the under-developed countries."²⁰⁷ Williams had remained a steadfast proponent of breastfeeding and other basic solutions to malnutrition that she had encouraged on the Gold Coast. In an article she wrote the same year as the Jamaica conference, she lamented how paediatricians continued to neglect malnutrition because much information remained inaccessible.²⁰⁸ In Williams' view, great strides could be made if medical training covered childhood malnutrition. Her attitudes mirrored those of many of her peers who were enraged by the low status accorded nutritional science by medical schools. Further frustration came from the failure of nutritionists to contextualize appropriately nutritional problems located in the developing world. This western-centrism that informed so much nutritional work at the time was increasingly discussed during the mid-1950s. An editorial in the *Lancet* posited, "it is vital to ensure that the instruction they [doctors] will give relates to the actual dietary habits of the country in which it is to be applied, and not simply to those of the countries which produce most of the textbooks."²⁰⁹ Unfortunately for local people interested in medicine, they were usually excluded from attendance at medical school; such training was reserved for colonialists except perhaps in the case of Thailand.²¹⁰ These opinions inspired FAO's nutrition education policy which had, since 1951, promoted nutrition education training in developing countries.²¹¹

Waterlow summed up general thinking on protein at the beginning of the Macy Conference when he remarked that "most of us [scientists present] think that protein

²⁰⁶W. R. Aykroyd, letter to E. J. R. Heyward, Rome, 15 March 1954, FAO Archives, 57.1C1.

²⁰⁷Ibid.

²⁰⁸Cicely D. Williams, 'Kwashiorkor', *J.A.M.A.*, 5 December 1953, 1280-1285, on p. 1282.

²⁰⁹'Better nutrition', *Lancet*, 21 May 1955, 1061-62, on p. 1062.

²¹⁰Nevin S. Scrimshaw, interview, 25 July 1995.

²¹¹Jean W. McNaughton, 'A review of FAO's activities in nutrition education and training 1949-1977', paper presented at International Conference on Nutrition Education, Oxford, 31 August-7 September 1977, Unicef Archives, PR-NU-002, p. 2.

deficiency in the broad sense is probably the commonest deficiency in the world".²¹² At a conference rife with disagreement, no one raised a voice in protest to this contention. Waterlow's comment signalled to all participants and to FAO, WHO, and Unicef, that the tide had fully shifted: protein deficiency, though difficult to diagnose, could be widely considered the greatest nutritional problem facing humankind. His words radiated outward along with the words and studies of his peers and although perhaps they were but opinions, not policy statements, they did guide policy, especially in the case of Unicef. It is crucial to note that most of the scientists involved in such conferences did not view themselves as policy makers in any sense. Clements, the former head of the WHO Nutrition Section, summed up the purpose of this conference when he pointed out that they had not assembled "to solve problems, because they are not solved round a table; nor simply to exchange information, nor to make formal recommendations. I think our main purpose has been to clarify our minds."²¹³ Clements was not alone in his estimation of such conferences. Aykroyd wrote in an article on FAO that

The value of international meetings is often questioned...The multiplicity of international meetings, indeed, strains the resources of smaller countries in respect of both personnel and finance...The formal recommendations adopted at international meetings are often of quite secondary significance. If all the recommendations of international meetings had been acted upon, the world would be unrecognisably different.²¹⁴

Certainly, however, recommendations and even discussion points had ramifications. The conference participants in Jamaica, for example, recommended small scale fish processing plants in Chile, funded by Unicef as well as other more elaborate operations.²¹⁵ There was no comment made in response by Unicef, however, as the organization was conspicuously unrepresented.

Unicef's Milk

From Unicef's inception through the 1950s, the cornerstone of its nutritional programme and arguably of all its projects, was the milk conservation programme

²¹²Waterlow, op. cit., note 199 above, p. 16.

²¹³Ibid., p. 276.

²¹⁴Aykroyd, op. cit., note 48 above, p. 237.

²¹⁵Waterlow, op. cit., note 199 above, p. 253.

(ped) (MCP). Unicef initiated MCP in 1948 in an effort to boost milk supplies and ^{and the broad consensus on the nutritional value of milk} production in war-ravaged countries. Orr's advocacy of milk before the war had solidified the development organizational view that milk was a super-food, capable of providing the most effective nourishment. With the technical expertise of WHO and FAO, Unicef provided equipment and funding for milk pasteurization centres to be established, often jointly with government funding.²¹⁶ As was the case with FAO's and WHO's independent nutritional programmes, initial interest remained within European borders. By 1951, however, Unicef consciously transferred its emphasis to developing countries.²¹⁷ After MCP had shown success in Europe, Unicef received requests for assistance from Turkey, Israel, Egypt, Latin America, and eventually, Africa. The outcome of these requests was extensive work in the Middle East and fewer projects in Latin America and Africa. While the radically deficient infrastructures of the developing countries challenged Unicef staff to innovate, the project focus remained on distributing milk to school-aged children.²¹⁸ Unicef's milk obsession frustrated Aykroyd and his FAO staff terribly. In a letter to FAO's Director-General, Aykroyd explained that Unicef's supplementary feeding programmes had gotten out-of-control after 1949 when "Unicef frequently initiated supplementary feeding programs limited almost entirely to the distribution of skimmed milk, without prior consultation with FAO either at headquarters or in the field."²¹⁹ Apparently, however, Unicef was coming around to FAO's perspective on the need to incorporate education into such programmes and to plan for the day when milk contributions ended.²²⁰

Toward the end of 1953, Maurice Pate, the Executive Director of Unicef, in his 'General Progress Report', expressed frustration about the inability of Unicef milk conservation and mass health campaigns to have any noticeable impact on undernourishment in economically underdeveloped countries. In particular, he felt that Unicef lacked programmes that could be sustained by the countries themselves. Moreover, the limits of MCP had become clear, and the administration, under the tutelage of FAO, decided to pursue other child feeding programmes based on vegetable milk, fish flour, and other emerging products. Only with such developments

²¹⁶Ron Hill, 'Unicef history project: milk conservation programme', 1983, New York, Unicef Archives, CF/HIST/-81, pp. 4-6.

²¹⁷'Unicef assistance for child nutrition', op. cit., note 62 above, p. 24.

²¹⁸Hill, op. cit., note 216 above, pp. 15-24.

²¹⁹W. R. Aykroyd, letter to Director-General, 8 January 1952, FAO Archives, 57.1C1.

²²⁰Ibid.

could Unicef hope to ameliorate the plight of malnourished children.²²¹ In a gesture emblematic of Unicef's shifting priorities, in 1953 it removed the words 'International' and 'Emergency' from its name and became the United Nations Children's Fund.²²² The shift could be easily seen in the realignment of allocations. By 1953 eighty-five percent of Unicef funds was allotted to long-term programmes while the remainder targeted emergency aid; ninety-five percent of all funding was earmarked to aid underdeveloped countries.²²³ In the area of infant and childhood malnutrition, Unicef was beginning to stress three main areas: maternal nutritional improvement, distribution of nutritious local foods for infants and children, and nutrition education.²²⁴

Unicef's perceived need for high-protein fish flour and similar products marked the influence of the nutritionists at FAO and WHO on Unicef policies. Without in-house technical support, Unicef relied on its field staff and FAO and WHO experts for evaluations of nutrition problems, methods of development, and international credibility. While fighting for a permanent extension of Unicef's work in 1953, a Unicef representative reassured the U.S. Congress that Unicef aid was technically sound since "WHO gives technical approval to all health projects prior to voting of aid by the Unicef Board, and FAO gives similar approval to milk conservation and other types of Unicef-aided food conservation projects."²²⁵ Reflecting these strong inter-organizational bonds, Pate commented in 1955 that although it was not Unicef's place to develop new high-protein foods such as soybeans, and peanut and cottonseed flours, "Unicef obviously has a strong interest in seeing this developed under the stimulation and co-ordination of FAO, or FAO and WHO."²²⁶ Thus, as the development of other protein solutions progressed slowly, milk remained the central component of Unicef's nutritional work. As U.S. milk surpluses skyrocketed, Unicef decided to take advantage of the supply and provide for long-term (minimum of 4 years) feeding programmes which sought to use milk as a springboard for community-wide nutrition education. The scope of the milk project, which was most prominent in

²²¹Maurice Pate, 'Executive Director's General Progress Report', New York, September 1953, E/ICEF/236, p. 4.

²²²See: Sir Robert Jackson, 'Foreword', in Black, op. cit., note 42 above, p. 10.

²²³See: Martha M. Eliot, 'Martha M. Eliot, U.S. Representative on the Executive Board, Statement to Congressional Committee', 1953, Unicef Archives, CF-NYH-09R.H1/C/02.09, box T006, pp. 1, 10.

²²⁴'The improvement of child nutrition with special reference to inter-agency action', 3 February 1953, New York, E/ICEF/217, p. 8.

²²⁵See: Eliot, op. cit., note 223 above, pp. 12-13.

²²⁶Maurice Pate, 'Executive Director's general progress report', New York, February 1955, E/ICEF/281, pp. 19-20.

Central America, was enormous. Unicef's feeding programmes accounted for fifteen percent of the global annual export of dried milk.²²⁷ In spite of ongoing criticism of milk projects, school feeding remained popular. At a Unicef Regional Directors' reunion, one participant presented the pros and cons of school feeding and asked whether Unicef should increase its commitment to such projects. His evaluation concluded that the pros outweighed the cons and that the effort should further expand.²²⁸

As was apparent in the reports of the first few meetings of the Joint FAO/WHO Expert Committee on Nutrition, protein needs of children permeated nutrition thought. A programme that did not address protein deficits, according to the experts, would be of no use. Thus, in 1954, Pate noted that Unicef had pumped up its skim milk operation and had distributed one quarter of the U.S. milk surplus -- nearly 100 million pounds of dry skim milk powder. Further, contacts with officials in Africa began reflecting promising possibilities for future co-operation.²²⁹ A year later, however, it was apparent that at least as far as Unicef-aided milk plants were concerned, Africa was the laggard. Out of 121 operational Unicef-assisted plants, none was in Africa, and out of 171 authorized, only one was in Africa and only 26 were in developing nations.²³⁰ Pate remarked that "while a dry milk surplus and unused capacity for milk drying exist in several countries, at the same time large number of children in other countries lack sufficient amounts of high quality protein, such as contained in dried skim milk."²³¹ Dried skim milk, believed Unicef, was the best manner to improve childhood nutrition in the countries where Unicef operated. Moreover, the steady supply of U.S. government surplus assured at least short-term distribution to other childhood nutritional programmes. In spite of the abundance of milk, the Executive Director stressed the development of alternative protein products which could make "a significant impact on the long-range problem of protein malnutrition in children in underdeveloped countries".²³²

²²⁷Unicef assistance for Child Nutrition', op. cit., note 62 above, p. 25.

²²⁸David R. Hunter, 'Is school feeding a type of program on which Unicef should concentrate more than it does now?', New York, presentation at Regional Directors' Conference, 30-31 March 1953, Unicef Archives, CF-NYHQ-05ANS-002, pp. 1-2.

²²⁹Maurice Pate, 'Executive Director's General Progress Report', New York, February 1954, E/ICEF/248, p. 6.

²³⁰Pate, op. cit., note 226 above, p. 13.

²³¹Ibid., p. 15.

²³²Maurice Pate, 'Executive Director's General Progress Report', New York, July 1955, E/ICEF/300, p. 39.

Forging Hunger Programmes in the Developing World

Scientists in the 1950s who staked an interest in the improvement of health conditions in the developing world found themselves in a developmental quandary involving quick-fix solutions and long-term, horizontal planning. Historian Anne Hardy has argued that in the early-1940s, as malnutrition emerged as an international problem, "technical solutions by no means replaced structural planning as the dominant ethos of the international nutrition community."²³³ Although the same clearly held true for the 1950s, technical solutions certainly maintained an advantage. While FAO and WHO consultants were constantly firing a barrage of ideas at their respective nutrition departments, few had palpable holistic alternatives to supersede the popular vertical solutions of the day. FAO was exceptionally frustrated by Unicef and WHO's association with its supplies. Jean Ritchie, a British nutritionist working in the field for FAO, wrote Aykroyd of her difficulties in Bangkok:

in the minds of the Public Health Departments and Governments in general the Unicef's supplies of D.D.T., dried milk etc. are associated with WHO, who get credit for bearing gifts with them. Until we have something to offer in the way of laboratory equipment or other such supplies associated with TA [technical assistance] personnel, the competition will be tough.²³⁴

Thus, in spite of widespread rhetorical support for broad-based horizontal structures, tangible results in the form of fertilizer, milk distribution, immunization, and nutritional education were associated with success. Although these methods were couched rhetorically in terms of broader, horizontal programmes, the UN agencies found the latter expensive and difficult to implement and manage. Unicef's decision to promote milk supplementation emerged from the U.S. government's offer of millions of pounds of surplus dried skim milk that **could** save lives. Could the administration, on the grounds of principle, turn down this life-saving substance? The answer was a resounding, though initially reluctant, no. Unicef staff understood the possibility that this dried skim milk supply could evaporate and leave behind no lasting improvements. Aykroyd at FAO had stressed that only temporary results would be achieved and that

²³³Hardy, op. cit., note 21 above, p. 62.

²³⁴Jean Ritchie, letter to W. R. Aykroyd, Bangkok, 28 October 1950, FAO Archives, 57.0A1, p. 2.

few of the neediest children would be benefited.²³⁵ However, Unicef chose to move onward and try to incorporate milk into horizontal programming.

A few scientists hailed horizontal solutions as the only worthwhile methodology for meaningfully improving nutritional status. Not surprisingly, the small number who had extensive experience in the field making observations on a village level were the leading proponents of such action. Platt, a leading Africanist, was an exceptionally articulate advocate for thoughtful plans to prevent malnutrition. Like his peers at FAO, WHO, and Unicef, Platt was baffled by the complexity and knowledge required for effective programmes. In 1952 he pessimistically declared that "experience of the application of knowledge about the prevention of malnutrition in rural African communities is so meagre [that the topic can scarcely be approached]."²³⁶ Coming from one of the most prominent and seasoned nutritionists, these words summed up the virgin nature of effective development programmes. Nevertheless, Platt did not abandon thoughts of engaging in development work that operated on a village level though he readily acknowledged the need for the spheres of horizontal and vertical improvements to overlap: "it is rapidly being realized that technical authorities must be well-informed about conditions in the villages in which they work."²³⁷ In a similar context, Platt criticized the development establishment's designation of ignorance (of indigenous peoples) as the cause of poor development and assigned the blame equally to the government officials and authorities with influence on nutritional issues.²³⁸

Although lacking a solid basis for action, Platt and others energetically promoted the improvement of health for mothers and children in the developing world as the central priority for international health work. According to their arguments, healthy women could improve food supplies and practice responsible breastfeeding to play a major role in development.²³⁹ D. B. Jelliffe, a nutrition consultant for WHO and physician with extensive experience in Sudan, Nigeria, and India, recognized that infant nutrition was a central nutritional concern in developing countries and through WHO published his classic monograph on the subject, *Infant Nutrition in the*

²³⁵W. R. Aykroyd, 'Statement to the Executive Board, Unicef', 28 November 1950, FAO Archives, RG 57.1 series H1, p. 3.

²³⁶B. S. Platt, 'Malnutrition In African Mothers, Infants and Young Children', in *Report of the Second Inter-African (C.C.T.A.) Conference on Nutrition*, Gambia, 1952, 15-26, on p. 15.

²³⁷*Ibid.*, p. 17.

²³⁸*Ibid.*, pp. 20-21.

²³⁹For a summary of Platt's views on breastfeeding, see: B. S. Platt, 'Infant-feeding practices breast feeding and the prevention of infant malnutrition', *Proceedings of the Nutritional Society*, 1954, 13(2), pp. 94-105.

Subtropics and Tropics. Jelliffe approached the problem with a sharp, confident rhetorical style that sought to overturn the direct application of industrialized countries' medical principles to the developing world. He began his tome with the following: "A knowledge of the present situation clearly shows that it is quite useless to expect the standard Western-style textbook instructions on infant feeding to have any significance for most children in these parts of the world, who easily form the numerical majority of the global child population."²⁴⁰ Jelliffe resented the use of technologies from industrialized countries in developing countries and pleaded for a culturally sound approach that would, as Platt had suggested, pay attention to communal needs and customs. Further, Jelliffe avoided placing the colossal emphasis on kwashiorkor that his peers had, and instead placed it in the wide spectrum of ills that befall malnourished children. This move sought to focus community health workers and scientists on the need for maternal and child health (MCH) centres and the need for improved infant feeding instead of the previously short-sighted focus on the aetiology of kwashiorkor.²⁴¹

Platt's ideology, in contrast to Jelliffe's, was less certain and resonated with more idealism and less science. Platt often cited statistics that showed that up to half of all children born in the developing countries died before reaching the age of ten. Inspired by such morbid figures he asked, "Can we stand aloof and ignore this appalling state of affairs?...Why indeed has attention not been given to this before now?" In response to this question Platt explained "that the facts were not, until recently, sufficiently well established."²⁴² In the mind of Platt and others, the time had finally come for developmental action. Orr had initially wanted food distribution mixed with technological improvements which he believed would later lead to indigenous production. In contrast, Platt placed full emphasis on boosting indigenous production. As they had with Orr's ideology, the nutritional scientists found Platt's ideas too large to swallow. They decided to continue focusing their efforts on protein malnutrition -- treating it as the key to broader developmental progress. Agreement

²⁴⁰D. B. Jelliffe, *Infant Nutrition in the Subtropics and Tropics*, Geneva, WHO, 1955, p. 7.

²⁴¹For the seminal reference work on kwashiorkor from this time period, see: H. C. Trowell, J. N. P. Davies, and R. F. A. Dean, *Kwashiorkor*, London, Edward Arnold Ltd., 1954.

²⁴²B. S. Platt, 'The malnourished community: care of mothers and children as a first step towards improved feeding', *Lancet*, 6 November 1954, pp. 929-31. Platt was notably a protein malnutrition expert in his own right. See: B. S. Platt, 'Protein malnutrition', *Lectures on the Scientific Basis of Medicine, Volume IV: 1954-1955*, London, Athlone Press, 1956, pp. 145-66.

came from many forums. An editorial in the *Lancet* applauded work on protein requirements and encouraged more of it.²⁴³

WHO

Although WHO played a major role in conferences and committees prior to 1955, it did not dwell on nutrition with the verve that FAO and Unicef had, and has thus played a relatively minor role in this history so far. In 1951, Robert Burgess replaced Clements as head of the Nutrition Section. Burgess, trained in medicine and public health, had worked before W.W.II in Malaysia with the Colonial Medical Service. While investigating malaria, he found that the role of malnutrition in morbidity and mortality was overlooked. Burgess became frustrated that his colleagues were "more interested in the parasite than in overall health."²⁴⁴ At WHO, Burgess felt that the agency leadership was not very supportive or understanding of nutrition issues.²⁴⁵ Nevertheless, under his leadership, by 1955, the tone and conception of nutrition in the Nutrition Section began to wax philosophic as its experts attempted to set WHO apart from the other two organizations. According to a consummate WHO document on its nutritional programme, in contrast to public health workers who focused on practical health work, "nutrition workers were devoted mainly to research into physiological and biochemical problems, and to the discovery of new facts and new nutritive factors on which an explanation of certain nutritional phenomena could be based."²⁴⁶ While WHO acknowledged that such scientific work had had significant applications, the staff feared that nutrition itself had become sequestered from broader public health programmes in the developing countries. Considering the new knowledge of nutrition that could be applied in the developing countries, WHO believed that the time had come for its Nutrition Section to concentrate on specific nutrition programmes under the umbrella of its public health services.²⁴⁷ WHO seemed concerned with projects that had tangible improvements in health and nutrition and indirectly condemned FAO for its tendency to stress the establishment of laboratories for food analysis, which produced feeble and expensive

²⁴³'Better nutrition', op. cit., note 209 above, pp. 1061-62.

²⁴⁴R. C. Burgess, interview, 11 July 1996.

²⁴⁵Ibid.

²⁴⁶'Outline of Nutrition Programmes in Public Health, Notes on the fight against malnutrition in the field of public health', op. cit., note 106 above, p. 1.

²⁴⁷Ibid.

results.²⁴⁸ On the topic of kwashiorkor, WHO asserted that although considerable work had been done on the natural history of the disease and its treatment, the problem of prevention had not been approached in a meaningful manner.²⁴⁹

While WHO may have desired improved programmes for attacking hunger, it certainly had decided by 1956 that the centrepiece of any such programme would be protein. FAO shared this view wholeheartedly, declaring at a committee meeting in Rome that protein was "perhaps the most important of the nutrients needed by human beings and other organisms".²⁵⁰ Like WHO, FAO felt that increased knowledge had endowed the organization with increased responsibilities for improving the world protein problem.²⁵¹ The presence of protein enthusiast Scrimshaw as WHO representative at this FAO committee meeting revealed that WHO's and FAO's perspectives were not fundamentally different, and there was a constant flow of information between their nutrition divisions. Like WHO, FAO too was searching for the next step in the battle to alleviate global malnutrition. Many of the programmes to date had been sub-optimally effective. In the report of a FAO/WHO nutrition seminar, the final evaluation was characteristically bleak. After two FAO/WHO workers travelled nine months in twenty-two countries to find the sixty participants, many of the participants reported "they would probably not be able to bring about any changes in their agencies at home" though they would change their personal approach to nutrition problems.²⁵² Such reports undoubtedly inspired WHO and FAO to change their personal approach to nutrition problems as well.

Princeton and the Protein Advisory Group (PAG)

A Macy meeting of thirty biochemists, nutritionists, paediatricians, and scientists in Princeton, New Jersey in 1955, sowed the seeds for the establishment of what would be perhaps the most influential group in nutrition work: the PAG. At the first Macy conference in Jamaica, described in this chapter, protein malnutrition and kwashiorkor comprised the centrepiece of discussion. At the Princeton conference, the same issues dominated and the conference urged the formation of an advisory

²⁴⁸Ibid., p. 3.

²⁴⁹Ibid., p. 37.

²⁵⁰*Protein Requirements I. Report of the FAO Committee, Rome 24-31 October 1955*, Rome, FAO, FAO Nutritional Studies no. 16, 1957, p. 47.

²⁵¹Ibid., p. 2.

²⁵²F. W. Clements, *Report of an International Seminar on Education in Health and Nutrition in Baguio, Philippines*, Rome, FAO, FAO Nutrition Meetings Report Series no. 13, 1956, p. 76.

group that would function autonomously and make recommendations about all aspects of indigenously available protein sources.²⁵³ Unicef coverage of the conference highlighted the high confidence held for the scientific possibilities of addressing protein malnutrition. History was made in Princeton -- though the laymen would not know it - - at least according to one overbearing Unicef press release: "Had you been in Princeton you would not have known that anything of importance was afoot. Had you even been in the conference room you would not have found much to excite you for there was little brilliance of oratory and no world-shattering decisions."²⁵⁴ Nonetheless, at UN agency headquarters, the conference was hyped as a breakthrough for nutritional work.²⁵⁵

Following the Princeton conference, WHO, which had played a notably lesser role than Unicef and FAO in nutrition policy, planning, and programmes to date, took the initiative in 1955 of establishing a group of clinical nutritionists -- called the PAG - - to provide expert advice to FAO, WHO, and Unicef on emerging low-cost, high-protein weaning foods. At first, Aykroyd at FAO was reluctant to support such a group, believing that the technical agencies on their own could develop the foods. FAO was already attempting to procure an arrangement with Unicef for a dubious fish flour project in Chile. During an argument over technical expertise between Aykroyd and R. C. Burgess, Burgess asked Aykroyd, "'would you feed this stuff to your own child?'"²⁵⁶ Aykroyd then backed down and agreed that a group of experts would be necessary. A small group of scientists also backed the plan and lobbied the agencies to support it. WHO's Director-General, Candau, was initially attracted to the concept but only after hearing Scrimshaw's enthusiasm did the plans for the group move forward. FAO could do little more than summon passive approval for the group since its leadership feared that its technical staff would be subjugated. Unicef had just recently received rather poor advice on protein from FAO and was therefore anxious to see a respectable, authoritative group consider the topic. Thus Unicef provided the PAG with an initial grant of \$300,000 for its research, and the Rockefeller Foundation

²⁵³William J. Darby, 'Beginnings of PAG', in A. Sachs and P. Cormier (eds), *The PAG Compendium: The Collected Papers Issued by the Protein-Calorie Advisory Group of the United Nations System, 1956-1973*, New York, Worldmark Press, Ltd., 1975, p. xv.

²⁵⁴'Away from the TV cameras: world scientists discuss malnutrition', Princeton, Unicef, UN Archives, CF9D 79, folder A023.

²⁵⁵See 'Princeton conference on malnutrition', New York, *Unicef Staff News*, no. 174, 1 July 1955, pp. 3-6.

²⁵⁶R. C. Burgess, interview, 11 July 1996.

allocated an additional \$550,000.²⁵⁷ This early financial support assured the PAG of short-term influence and support. William J. Darby, the chairman of the department of nutrition at Vanderbilt University, served as the first co-ordinator and chairman of the PAG, and in that capacity worked hard to expand its size and influence.²⁵⁸

FAO and Unicef, although they posted observers at all PAG meetings, waited until 1960 to become full sponsors.²⁵⁹ The PAG telegraphed to WHO, FAO, Unicef, and the UN, that protein was to be the foundation of most nutrition programmes from then on. The impressive roster of PAG members unmistakably reflected the direct line FAO and Unicef leadership had into the group. Its first members numbered six: Darby, György, King, Sebrell, Holt, and Platt. They designed and prepared the first *PAG Bulletin* which, in January 1956, was received by a small audience at WHO, FAO, and Unicef headquarters.²⁶⁰ Although its formation emanated from a WHO initiative, the barrage of protein rhetoric that had come from all three organizations during the previous six years had primed the pump for vastly expanded protein activity. While the PAG influenced much of nutritional thought focused on the developing world during the subsequent years, other platforms which broadly addressed child nutritional problems continued, often outside the PAG's sphere.

Conception of Aid

Although this chapter began with Orr's idealistic aims for ending hunger still hanging in the tapestry of international debate after the war, such rhetoric rapidly dissipated during the following years. It would be a myopic reading of history to suggest that FAO, WHO, and Unicef took full responsibility for the state of hunger in the world and sought to conquer it. Although rhetorically their constitutions do assume such roles for their administrations, the UN and its member governments did not wish to endow these agencies with the broad powers that would provide opportunities to affect sweeping global development. In the UN's view, these agencies had been established in order to catalyse and aid development that countries

²⁵⁷William J. Darby, 'History of PAG', in A. Sachs and P. Cormier (eds), *The PAG Compendium: The Collected Papers Issued by the Protein-Calorie Advisory Group of the United Nations System, 1956-1973*, New York, Worldmark Press, Ltd., 1975, p. xxiv.

²⁵⁸William Darby, interview, 28 January 1996.

²⁵⁹Nevin S. Scrimshaw, 'Introduction', in A. Sachs and P. Cormier (eds), *The PAG Compendium: The Collected Papers Issued by the Protein-Calorie Advisory Group of the United Nations System, 1956-1973*, New York, Worldmark Press, Ltd., 1975, p. xiii.

²⁶⁰Darby, op. cit., note 253 above, p. xv.

consciously wished to pursue. The commitment the agencies felt toward nutrition was reflected in the funding levels at FAO, WHO, and Unicef. While budgets at these organizations expanded meteorically during their first years, their nutrition allocations remained low. FAO spending on its Nutrition Division represented only 5-6% of its total expenditures and consistently had the smallest budget of the five FAO divisions.²⁶¹ WHO, with a total budget approximating FAO's, gave its Nutrition Section an even smaller percentage, roughly 2-3% of its total budget throughout the 1950s.²⁶² Between 1947 and 1959, roughly ten percent of Unicef's budget targeted nutrition while the remainder was split between child health programmes (services and mass campaigns) and emergency relief.²⁶³

Speaking in 1956 at a symposium on the nutritional work of the three agencies, P. Dorolle, Deputy Director-General of WHO, summed up the pragmatic sentiment which characterized the agencies' general views, and their opinion of nutritional issues. He explained that these organizations were not empowered to "give direct services to the people of the world. Each government is responsible for the welfare of its people; international organizations, when the governments ask them, help governments to carry out that responsibility."²⁶⁴ Dorolle continued, "The international organizations also do work that has a more general application. They prepare international agreements, establish standards and collect and publish information."²⁶⁵ Thus, in Dorolle's view, these agencies had a rather limited and passive advisory role in the formation of nutritional programmes and policies. Dorolle's words represent the shot of realism FAO, WHO, and Unicef had to contend with after their initial years of excitement and post-war reconstruction. Nutrition, in particular, presented them with chronic problems that could scarcely be addressed by a few tactical projects such as those that had staved off epidemics in Europe and prevented massive starvation there as well.

²⁶¹*Report of the 8th Session of the Conference 4-25 November 1955*, Rome, FAO, March 1956, p. 114. In 1957, \$986,780 out of FAO's \$15,380,820 budget went for nutrition. *Yearbook of the United Nations 1957*, Office of Public Information, United Nations, New York, 1958, p. 437.

²⁶²Figures extracted from *Official Records of WHO, 1950-1960*, and from *The First Ten Years of the World Health Organization*, Geneva, WHO, 1958. See also: J. M. Bengoa, personal correspondence, 15 February 1996. In 1957 WHO's budget was \$18,425,093. *The First Ten Years of the World Health Organization*, Geneva, WHO, 1958, p. 523.

²⁶³Ilercil, op. cit., note 63 above, pp. 40/1. Unicef's annual budget figures are misleading since more than half the budget was designated for emergency relief. That aside, its budget was nearly the same as WHO and FAO. See also: Black, op. cit. note 42 above, pp. 492-94.

²⁶⁴P. Dorolle, op. cit., note 67 above, p. 2.

²⁶⁵*Ibid.*

Chapter IV

Young Children Come First

Kwashiorkor Enters the Limelight

The formation of the PAG followed heightened concern about protein food sources for weanlings and the extent of protein malnutrition in the developing world. With new data coming in from developing countries which stressed protein malnutrition in weaning children, WHO deemed that an expert scientific body should investigate high-protein weaning foods thoroughly and steer the UN agencies in the proper direction. In 1957 Waterlow and Scrimshaw together cleared up the lagging problem of whether kwashiorkor, which was still known by a number of different terms and variant symptoms, was clinically the same world-wide. Their clarification helped consolidate the protein field and left no doubt that kwashiorkor in Africa was indistinguishable from kwashiorkor in Latin America.¹ This finding coincided with a boost in kwashiorkor interest from WHO which trickled through the administrations at Unicef and FAO. In 1958, WHO summed up its interest in nutritional work with the following statement: "Kwashiorkor is now the main nutritional disease with which the Organization is concerned."² Essentially it was this protein nutritional interest, which had marked support from the UN and its agencies, that began to shape something of a priesthood of nutritionists that exercised substantial control and influence over nutritional policy.

The PAG's focus on protein and kwashiorkor further magnified interest in protein malnutrition in the developing world, while edging out other nutrition topics. Although many nutritional deficiency disorders -- mainly beriberi, pellagra, anaemia, and goitre -- were discussed at major conferences, in the early-1950s kwashiorkor became the nutritional disease, and discussion of other nutritional issues frequently fell on deaf ears, at least within the UN agencies.³ Donald McLaren, a specialist in malnutrition and eye disease, since the 1950s has been an avid critic of this priesthood

¹See J. C. Waterlow and Nevin S. Scrimshaw, 'The concept of kwashiorkor from a public health point of view', *Bulletin of the World Health Organization*, 1957, 16, pp. 458-64.

²*The First Ten Years of the WHO*, Geneva, WHO, 1958, p. 310.

³Increasingly intense examinations of kwashiorkor permeate the medical literature of this time period. For example, see: Helen B. Burch, Guillermo Arroyave, Ruth Schwartz, Ana Maria Padilla, Moisés Béhar, Fernando Viteri, and Nevin S. Scrimshaw, 'Biochemical Changes in Liver Associated with Kwashiorkor', *The Journal of Clinical Investigation*, 1957, XXXVI(11), pp. 1579-87.

and its associated policies. McLaren asserted that WHO alienated him and his central interest -- advocacy for increased research and action on keratomalacia, a debilitating eye condition caused by vitamin A deficiency -- because it fell outside its conception of nutritional disease. As evidence, McLaren cited the failure of WHO through much of the 1950s to have meetings on the problem of nutritional blindness, a problem afflicting millions of people annually. He felt that medical men who firmly believed they could solve the problem of protein malnutrition held the nutritional yokes of FAO and WHO.⁴

The view that many medical men saw themselves as veritable 'übermenschen' when in fact they lacked appropriate knowledge and tools, has substantial support. The inherent problem in the medicalization of hunger and malnutrition was, as Williams and numerous other medical field workers pointed out, that doctors were minimally trained in nutrition, and entirely uneducated in malnutrition in developing countries. Thus they had a misinformed view of their own abilities based on their success in treating and curing disease in industrialized countries. Their lack of training seemed acute at WHO, which, according to Scrimshaw, "was a medical organization...[where] doctors didn't know about nutrition."⁵ At least at FAO, Scrimshaw felt, the agronomists could sympathize with home economics and nutritional issues. That said, he nevertheless was unimpressed with the centralized manner in which the agency worked and candidly remarked that FAO's Nutrition Division had a few people scattered around the world with everyone else back in Rome.⁶ Scrimshaw asserted that while nutritionists during the 1950s were not overtly critical, "it was talked about in the corridors".⁷ Whispers of "they [FAO] should be working with Ministries of Agriculture as well as MOHs [Ministries of Health]"

⁴Donald S. McLaren, interview, 6 October 1995. Although McLaren's statement might sound hyperbolic, the record does show that WHO overlooked vitamin A deficiency and xerophthalmia throughout the 1950s except for a study in Indonesia between 1952 and 1954. While the FAO/WHO/Unicef Joint Expert Committee on Nutrition during sessions one, three, five and six raised the issue, WHO responded only weakly. See: 'Review of the Organization's programme in nutrition, 1948-1964: report by the Director-General', Geneva, WHO, provisional agenda item 2.9 for thirty-fifth session of the Executive Board, EB35/9, 27 November 1964, pp. 38-40. Several other sources support this assertion. Susan Pettiss, the former director of the Helen Keller Foundation, claimed that at Unicef, where the medical programme was tied to WHO, vitamin A supplementation was discussed by the Board in 1965 but was not considered meaningfully before 1971. Susan Pettiss, interview conducted by John Charnow, 27 October and 3 November 1983, Unicef Archives, interview file, pp. 13-14.

⁵Nevin S. Scrimshaw, interview, 25 July 1995.

⁶Ibid.

⁷Ibid.

resonated in the air.⁸ Without major precedents for such co-operation, this type of work developed slowly and was restrained by the small size of agency staff. In 1959, FAO's Nutrition Division had a staff in Rome of eighteen, one adviser at Unicef in New York, and an additional regional staff of seven. The latter was based in Washington, Mexico, Chile, Cairo, and Bangkok. WHO's Nutrition Section had three members at headquarters in Geneva, Scrimshaw (considered a staff member) at INCAP, and several consultants abroad.⁹

During the late-1950s, the atmosphere surrounding nutrition research and nutritional policy continued to be shored up as the composition of the FAO and WHO nutrition units became well-defined and their work along with Unicef's came to have a familiar rhythm.¹⁰ Essentially, protein malnutrition, by then synonymous with kwashiorkor, piqued interest and embedded itself into the scientific psyche of these organizations. Nevertheless, broader understanding of nutrition in communities inspired a significant, if not revolutionary, change in international approaches to malnutrition. Prior to 1955, scientific conception of hunger and malnutrition issues had been largely couched in terms of disease, essentially a disease-oriented approach. Many nutritionists and their political counterparts in policy conceived of hunger and malnutrition as diseases that, with adequate research, could somehow be treated by one medical treatment or another. After 1955, however, a more holistic conception of hunger and malnutrition was adopted that encompassed medical, agricultural, educational, and economic factors and promoted multi-faceted approaches to new nutritional programmes. It would be reductionist to assert that a holistic conception stifled the trend that preceded it since disease-oriented proponents continued to influence the field of nutrition. There was, nevertheless, a rather dramatic transformation which is the underlying theme of this chapter.

Kenneth Carpenter has explored a few of the issues and projects that shaped protein-related nutritional work following the PAG's establishment. In particular, he highlighted how international committees between 1950 and 1955 determined that protein for children -- specifically milk substitutes -- had to be developed and distributed to stem protein malnutrition. He also followed the development and

⁸Ibid.

⁹The responsibilities of FAO and WHO in the field of nutrition: note prepared by the Nutrition Division of FAO and the Nutrition Section of WHO', March 1959, WHO Archives, folder 1, box A.0918, p. 2.

¹⁰Highlighting the high comfort level of Unicef with FAO, in his annual report to the Unicef Executive Board, Executive Director Maurice Pate joyously announced the appointment of a full-time FAO adviser and ongoing FAO/Unicef work. See: Maurice Pate, 'Statement of Maurice Pate to Executive Board', 22 October 1956, Unicef Archives, 88R025, box T-006, Teply files.

eventual failure, between 1955 and 1975, of numerous high-protein formulas, from fish protein concentrate to Lysine-enriched grain.¹¹ Although he thoroughly traced protein-rich food development, Carpenter fell short of properly explaining **why** these foods were being pursued vigorously. Much like the protein nutritionists themselves, the few historians who have touched on contemporary nutritional history have focused on the high-tech aspects of nutritional developments and have ignored the context of these advances. The broader political, programmatic, and scientific climate that telescoped out from the protein obsession is central to the discussion in this chapter.

Protein and Calories

For the purpose of continuity, this dissertation avoids expansive discussion of nutritional diseases besides those related to protein-calorie malnutrition. Kwashiorkor is a necessary focal point for two reasons: 1) it was, for decades, the most influential and popular malnutritional disease and 2) in later terminology it came to rest under the heading 'protein-calorie malnutrition' a term that I think well describes chronic persistent hunger. Historically, the term protein-calorie malnutrition (PCM) comes closest to reflecting the term 'hunger' and to encapsulating the broadest aspects of international malnutrition problems. In this light, PCM provides a reasonable probe that can be used to examine conceptions of hunger and malnutrition and their solutions. Furthermore, PCM during the decades discussed in this dissertation was considered the most significant public health problem in developing countries and received the lion's share of agencies' budgets. PCM was not the term of choice until the close of the 1950s.¹² Protein-malnutrition and protein-energy malnutrition (PEM) were used most frequently.¹³ PEM and PCM are synonymous and their central importance stems from their replacement of the term protein-malnutrition and

¹¹Kenneth J. Carpenter, *Protein and Energy: A Study of Changing Ideas in Nutrition*, New York, Cambridge University Press, 1994, pp. 161-179.

¹²For a concise description of protein and calorie malnutrition as experts perceived them in the late-1950s see: John F. Brock, 'Protein malnutrition', pp. 21-6, and Herbert Pollock, 'Caloric malnutrition', pp. 27-31, in *Control of Malnutrition in Man*, New York, American Public Health Association, 1960.

¹³For examples of indicators used in the determination of PCM see: F. Gómez, R. R. Galvan, S. Frenk, J. C. Muñoz, R. Chavez, J. Vasquez, 'Mortality in second and third degree malnutrition', *Journal of Tropical Pediatrics*, 1956, 2, p. 77. Also: J. M. Bengoa, D. B. Jelliffe, and C. Perez, 'Some indicators for a broad assessment of the magnitude of protein-calorie malnutrition in young children in population groups', *American Journal of Clinical Nutrition*, November-December 1959, 7, pp. 714-20. Also: *Measurement of Levels of Health*, Report of a Study Group, Geneva, WHO, WHO Technical Report Series no. 137, 1957.

incorporation of calories. Both terms emphasized food supply and other principles in a way in which the focused term protein malnutrition could not. Nevertheless, in the decades to come, the grip of protein over the rhetoric and research of UN agencies would outweigh calories and energy. Carpenter in *Protein and Energy* highlights this tendency through his emphasis on protein over energy.

Scientific focus and concern for protein were glaringly evident in FAO's seminal complementary reports on protein and calorie requirements. The pamphlet *Calorie Requirements* related in general terms the basic human caloric requirements but did not mention PCM or its role in world hunger.¹⁴ *Protein Requirements*, published in the same year, called attention to FAO's interest in supplementing diets with protein and broodingly stated that "The advances in knowledge enabled the [protein] Committee to adopt an approach which would have been impossible a few years ago, and at the same time increased its sense of responsibility."¹⁵ This remark brought to light how seriously the involved experts felt protein to be as a public health issue, leading them to conclude that protein was "perhaps the most important of the nutrients needed by human beings and other organisms".¹⁶ During this same period, Aykroyd at FAO reflected on the heightened interest in protein. In a letter to an FAO nutrition expert posted with Unicef in Guatemala, he wrote:

It is, of course, true that human nutritionists, after concentrating for a period on vitamins, are 'coming back again to protein'. The reason for this is that, within very recent years, the widespread existence of protein malnutrition in human beings has been demonstrated. When FAO and WHO began work on this subject a few years ago, the fact that protein malnutrition is a problem of world-wide importance was not generally recognized.¹⁷

From the top of the agencies down, protein was being hailed as the most important nutrient missing from diets, and protein malnutrition became the target of their work.

¹⁴*Calorie Requirements*, Rome, FAO, FAO Nutritional Studies no. 15, 1957.

¹⁵*Protein Requirements*, Rome, FAO, FAO Nutritional Studies no. 16, 1957, p. 2. Nevin Scrimshaw was the WHO representative at this FAO committee meeting in October 1955.

¹⁶*Ibid.*, p. 47.

¹⁷W. R. Aykroyd, letter to John Duckworth, 29 November 1956, FAO Archives, 57.1A5.

Disease-based Approaches

The late-1950s saw a few profound shifts in nutritional research as well as in policy. Iodine deficiency disorders, the relationship between malnutrition and infection, fortification of milk with vitamins A and D, and programmatic emphasis on the pre-school child were all themes that played prominently into the repertoire of nutritional thought. In comparison to the previous ten years which had witnessed the birth of three international agencies and the veritable "discovery" of kwashiorkor, this period was a continuation of work. Many researchers and activists were anxious for results. The problem of goitre presented one possible area in which concerted research could have sweeping positive ramifications.

In 1956 Scrimshaw and two colleagues at INCAP, G. Arroyave and O. Pineda, published a landmark study entitled, 'The Stability of Potassium Iodate in Crude Table Salt'. The investigators in 1953 and 1954 had sought a solution to one of the burning problems in developing nations, goitre, and the accompanying problem of incorporating iodine into crude, frequently wet salt. The preventive and healing powers of iodine in the form of potassium iodide are lost when added to crude salt. Scrimshaw and his colleagues demonstrated that iodine in the form of potassium iodate was sufficiently stable to justify its utilization in countries where goitre was endemic and traditional iodization was inappropriate.¹⁸ The broad applications of this finding would eradicate goitre in numerous areas, particularly in Latin America, during the ensuing decades and as early as 1957 inspired the Joint FAO/WHO Expert Committee to comment that, thanks to potassium iodate, iodine was being introduced into the salt supply in several countries.¹⁹ For Scrimshaw, it showed how a relatively simple solution could have substantive ameliorative effects on the nutritional status of people. It also seems to have contributed to his conception of broader malnutritional problems in children in terms of problems and technological solutions. In Scrimshaw's disease-oriented view, by the end of the 1950s, "we had the ability to wipe out goitre".²⁰ E. V. McCollum, a prominent nutritionist formerly active in vitamin research and a nutritional historian, well summed up the optimism with which researchers viewed nutritional investigations and breakthroughs. From his vantage point in 1957, McCollum declared:

¹⁸Guillermo Arroyave, Oscar Pineda, Nevin S. Scrimshaw, 'The stability of potassium iodate in crude table salt', *Bulletin of the World Health Organization*, 1956, 14, pp. 183-185.

¹⁹Joint FAO/WHO Expert Committee on Nutrition, *Fifth Report*, Rome and Geneva, FAO and WHO, WHO Technical Report Series no. 149, 1958, p. 28.

²⁰Nevin S. Scrimshaw, interview, 25 July 1995.

Before the emergence of the science of nutrition many millions of people in every generation, from ignorance, led lives blighted by malnutrition. Inferiority and suffering of domestic animals, with consequent economic loss, was even more widespread throughout the world. The new knowledge [of nutrition] brought about improvement of health and its attendant elevation of the status of human life above the sordid, to a degree scarcely equalled by any other agency concerned with the prevention or cure of disease. Implicit in physiological well-being is the prospect for betterment of courage, ideals, purposes, and achievement. Viewed from this standpoint, the rise of the science of nutrition is one of the greatest events in human history.²¹

Although McCollum's sentiment was hardly shared universally -- even within FAO and WHO nutrition units remained dwarfs compared to the others -- nutritional science had indeed risen through the ranks to present solutions to age-old problems. In the words of a *Lancet* editorial, "beri-beri and scurvy have been degraded from major menaces to preventable nuisances" while other nutrition problems persist.²² A topic that a few decades earlier had been virtually absent from medical education and had not even been considered a field in its own right, found its proponents speaking with authority and influence as the decade came to a close.

Although it seemed that most nutritional disorders had treatments -- ranging from vitamin A supplements to iodate -- the serious lacunae could be found in workable solutions for PCM. The search for sustainable solutions allowed nutrition education to receive its greatest support to date, though disappointed experts noted that nutritional improvements due to education could not easily be identified and that it may therefore "be necessary to wait until the children of today are the parents of tomorrow before its full impact on food habits and nutritional status is evident."²³ This comment underlines why researchers generally threw their support toward projects they believed could rapidly -- or at least sooner than a lifetime -- show tangible results. Thus there are two leading historical strands that run through nutritional ideology located in the developing world during the late-1950s. On one hand, researchers sought quick "magic bullet" solutions such as thiamine and weaning foods for the prominent and pervasive problems of malnutrition. On the other hand, and running ideologically contrary to the former, the UN agencies recognized the

²¹E. V. McCollum, *A History of Nutrition*, Boston, 1st ed., Houghton Mifflin Company, 1957, p. 421.

²²'Better Nutrition', *Lancet*, 21 May 1955, 1061-62, on p. 1061.

²³*Joint FAO/WHO Expert Committee on Nutrition*, op. cit., note 19 above, p. 46.

shortcomings of a vertical approach and tried, with difficulty, to develop horizontal applied nutrition programmes to treat the problem thoroughly.

School-aged Feeding Slows

Since the end of W.W.II, Unicef had focused its efforts on supplementary feeding programmes for school-aged children. In Europe, schools provided an excellent means for distributing aid and health care, and nutritionally deficient children could be identified with relative ease. Furthermore, schools were a logical starting-point for nutrition education that could encourage superior food habits. When Unicef began working in developing countries, the same framework for school-based nutrition intervention was transposed. Essentially the U.S. provided surplus dried milk powder in enormous quantities, and governments paid for much of the transportation and distribution costs. Unicef workers in the field along with FAO technical experts supervised distribution. FAO focused its staff on animal husbandry and the technical aspects of milk production while Unicef dealt with processing the milk and establishing dairy industries.²⁴ In some cases, Unicef encouraged local production of milk and constructed milk pasteurization plants that encouraged more efficient cattle breeding and provided milk supplies for feeding programmes. Seen in this light, supplemental feeding was an extension of the disease-based approach to nutritional deficiencies.

During the early-1950s, several field workers opined that school-based feeding was not viable. Emma Reh, a young nutritionist conducting surveys in Central America for FAO, perceived major problems which she communicated to Aykroyd: "We always found children in our sample who rejected Unicef milk, since they had better at home. While all school children are not well off, the non-school children are the more needy of the two."²⁵ Scrimshaw, through his work as director of INCAP, similarly believed that Unicef was misdirecting its efforts. In his view, morbidity and mortality were most prominent in pre-school aged children and it was they who should be the primary recipients of aid. During 1949 and 1950 Scrimshaw and his colleagues "couldn't find any signs of malnutrition in school children".²⁶ To test this empirical

²⁴Charles Egger, interview conducted by John Charnow, 25 October 1983, Unicef Archives, interview file, pp. 3-4.

²⁵Emma Reh, letter to Aykroyd, San Jose, Costa Rica, 9 November 1950, FAO Archives, 57.0A1. Reh's frustration with milk-feeding programmes and Unicef's work in particular were evident in this letter. She wrote disparagingly of Unicef: "Is there now a U.N. organization whose scope it would be to concern itself with the welfare of children? It takes more than a supply organization. A U.N. Children's Bureau is needed."

²⁶Nevin S. Scrimshaw, interview, 25 July 1995.

finding, they tried providing full school meals but found that the infant mortality rate stayed close to one hundred and kwashiorkor incidence remained steady.²⁷ The more INCAP investigators came to understand the troubling problems of malnutrition in surrounding Guatemalan communities, the clearer their focus on children under five became. Although FAO and Unicef had long before recognized that milk importation was not a long-term solution to malnutrition, there were few alternatives in sight.²⁸ Nevertheless, numerous field workers, particularly those working for Unicef, had positive perceptions of the feeding programmes.

The journal of Arthur Robinson, a long-time field administrator for Unicef and chief of the Northern South America office, presented an alternative view of feeding programmes. While visiting the sugar cane-cultivating island of St. Kitts where Robinson noted the land "owners are obliged to grow at least 5% of other crops, but in fact...I saw little but sugar", he visited a Unicef well-baby centre and related school milk distribution programme.²⁹ Robinson probed the chief doctor about the impact of the feeding programmes and learned that before the programmes, "There used to be a large percent of children in schools who had obvious clinical evidence of malnutrition; now it is difficult to find obvious evidence".³⁰ While it would be difficult to speculate on the true nutritional condition of the school-aged children seen by Robinson and Scrimshaw -- they were after all, in utterly different settings -- their commentary and concerns illuminate some of the key differences between the nutritional experts and the field workers. The experts certainly did see some signs of malnutrition in school-aged children but were drawn to the more profound symptoms of protein malnutrition in young children. Field workers like Robinson saw malnutrition in all ages of children and searched frequently for the means to do something for all of them. Usually, doing something meant school milk distribution. Two years later, however, no doubt inspired by the plethora of interest in protein malnutrition, Robinson implied, in one piece of correspondence, that protein malnutrition following weaning was a (if not the) major cause of death in young children. In fact, during just one day, he had seen seven infants die of protein malnutrition in a hospital.³¹

²⁷Ibid. The infant mortality rate (IMR) refers to the number of infants who do not reach the age of one, per thousand live births. In industrialized countries today, the figure tends to be less than ten.

²⁸See: *Report of the Nutrition Committee for the Middle East, First Session, Cairo, 18-26 November 1958*, Rome, FAO, FAO Nutrition Meetings Report Series no. 24, 1959, pp. 38-41.

²⁹Arthur Robinson, travel journal, 26 October 1957, Unicef Archives, CF-NYHQ-05AT.

³⁰Ibid.

³¹Arthur Robinson, letter to Miss Winifred Salisbury, 10 September 1959, Unicef Archives, CF-NYHQ-05AT.

Years earlier, Robinson had actually had the opportunity to meet Scrimshaw and had come away with a rather negative impression. Robinson's discourse shows that even Scrimshaw was initially a proponent of appropriately-designed milk supplementation projects. In 1952, Robinson attended a meeting "which consisted largely of a lecture by Dr. Scrimshaw" and that gave him the feeling Scrimshaw's opinions of milk were "equivocal and confused".³² After Robinson told Scrimshaw that Unicef's position on milk was largely based on the FAO/WHO Expert Committee on Nutrition's recommendations (which had advocated milk distribution) -- Scrimshaw suggested that the recommendations worked fine in Europe where milk distribution could be mixed with nutrition education but were ineffective in less developed countries unless combined with similar services. In the end, Scrimshaw advocated milk along with education about seven food groups before recognizing that the constituents of these groups were not available in Latin America. As a result of Scrimshaw's apparent contradictions, Robinson believed that "Altogether, for a man with two doctorates, he seems a very confused young man."³³ Perhaps more than highlighting any confusion on Scrimshaw's part, this incident showed the early cynicism of a practical nutrition worker toward an expert, and the frustration of an expert with his emerging field.

It is unclear how much impact INCAP investigations had on policy at Unicef during the mid-1950s since many top policy makers, such as Heyward, were having second thoughts already about school-feeding and milk powder distribution. According to his colleagues, Heyward in particular felt that milk powder and conservation projects by themselves "would have limited impact on nutrition and health."³⁴ This attitude appears to have had two profound effects on nutritional policy: firstly, the linking of milk distribution to community health care worker training and education, and secondly, the funding of protein research to find improved avenues for impact. In retrospect one could surmise that milk and protein supplements, while being a highly visible component of nutritional programmes, were nevertheless only one point of concentration. Carpenter's publication on protein as well as other contemporary pieces reinforce the view, however, that protein ruled minds, research, and policy. Is it a historical distortion that protein attracted greater attention than, for example, caloric intake? The written and oral records strongly

³²Arthur Robinson, letter to Robert Daves, 12 November 1952, Unicef Archives, CF-NYHQ-05AT.

³³Ibid.

³⁴L. J. Teply, letter to Jack Charnow regarding the flow of nutrition developments in Unicef, 25 May 1983, Unicef Archives, CF-NYH-09R.H1/C/02.09, box T006.

point toward protein having been the cardinal issue for nutrition workers and agencies. Les Teply, Unicef's senior nutritionist, provided seminal insight into the nature of protein interest in a letter to a colleague interested in nutritional history: "Although the surveys of Brock and Autret, for example, especially in Latin America, did speak of multiple nutritional deficiencies, including calorie deficiency, the main thrust of recommendations was to ensure supplies of nutritious protein suitable for young children."³⁵ Teply then explained that this concentration was not "irrational" because weaning foods had already demonstrated an unhealthy dependency on carbohydrates.³⁶ The force of the protein tide continued to grow as scientific studies brought ongoing attention to the plight of protein malnourished children.

By 1955, it was clear to one Unicef nutrition consultant, Charles Glen King, that Unicef's central nutrition projects in Central America -- MCP, school feeding, milk distribution through Maternal and Child Health Centers, and emergency relief -- were making little progress. In spite of milk being too expensive for the poor, King nevertheless encouraged improved milk production and further promoted broader educational programmes that had milk or other high-protein foods at their base. Unicef, King felt, should particularly concentrate on children aged one to five years since they seemed the hardest hit by severe malnutrition. In an apparently unintentional allusion to Darwinian struggle, King asserted that Unicef should focus on children from the time of weaning, when they were most prone to kwashiorkor, until they "are sufficiently advanced to obtain food on a more favourable basis in competition with other members of the family".³⁷ King's wording signified a clear break with Unicef's past concentration on school-aged children. In 1958 Moisés Béhar, an increasingly eminent nutritionist, along with Scrimshaw and colleagues, conducted an innovative study that investigated the cause of childhood death in four rural communities and compared their findings with the official statistics. The researchers sought to determine whether deaths brought on by malnutrition, often in the form of kwashiorkor, were being unreported. Their findings demonstrated that kwashiorkor was, in fact, a significant cause of death in nearly 20% of the cases. Furthermore, an analysis of the age distribution of mortality highlighted that 58% of deaths occurred in children under the age of five years, 5% between the age of five and fourteen years, and the remainder occurring in people fifteen years and over. Thus,

³⁵Ibid.

³⁶Ibid.

³⁷Charles Glen King, 'Recommendations for further development of Unicef-aided nutrition programmes in Central America and Panama', 1955, E/ICEF/293, 1-22, on p. 5.

their data suggested that "approximately one-third of the children born alive die before reaching five years of age."³⁸ The implications of their findings -- that nutrition in young children must be addressed more broadly in public health programmes -- in the hands of the politically savvy Scrimshaw, were bound to result in policy changes.

On the basis of INCAP evidence, Scrimshaw launched a highly critical attack on Unicef's school-child focus. He was joined by Jelliffe, another fervent advocate of young children's health concerns, as well as by other like-minded scientists. After undertaking much lobbying, particularly of Heyward, they succeeded, and Unicef radically realigned itself to make children under the age of five the priority. By 1957, change could be detected in sensitive communications of the Executive Director and the Executive Board: "The attention of the Board was likewise directed to the importance of improving the nutrition of pregnant and nursing mothers and of children during the crucial post-weaning and pre-school ages. Such an improvement would be even more valuable, from a health point of view, than improvement of the nutrition of the school age child."³⁹ Although this was not the first instance when Unicef approached such programmatic matters, the Executive Board admitted that, "The opportunities offered through maternal and child welfare centres to improve this [weanling] situation were great, although it was clear that, with a few exceptions, relatively little had thus far been done in taking advantage of these opportunities."⁴⁰ The school-based programmes Unicef maintained thus became more educational in nature: nutrition courses for rural teachers and other projects stressed sustainable improvements of diets through school gardens, and improved food preparation became popularized.⁴¹ FAO supported these new projects and also pressed for community agricultural development that reflected nutritional concerns.⁴² Unicef, however, held fast to its milk distribution programmes -- albeit shifted toward younger children -- for

³⁸Moisés Béhar, Werner Ascoli, Nevin S. Scrimshaw, 'An investigation into the causes of death in children in four rural communities in Guatemala', *Bulletin of the World Health Organization*, 1958, 19, 1093-1102, on pp. 1095-96.

³⁹Maurice Pate, 'Expansion of Unicef Aid to Maternal and Child Nutrition Note and Recommendation by Executive Director', 9 July 1957, E/ICEF/I.1123, p. 9. The original board comment can be found in 'Report of the Executive Board', April 1957, E/ICEF/344/Rev.1, paragraph 66.

⁴⁰Ibid.

⁴¹For a dry and clinical description of this transformation at Unicef, as well as of milk conservation programmes, see: John Charnow and Margaret Gaan, *History of Unicef*, 1965, Unicef Archives, pp. 68-79.

⁴²*Report of the Regional Seminar on School Feeding in South America, Bogotá, 27 October - 8 November 1958*, sponsored by FAO and Unicef, Rome, FAO, FAO Nutrition Meetings Report Series no. 23, 1959, pp. 42-3.

lack of a high-protein substitute.⁴³ Donald R. Sabin, who by 1958 was the co-ordinator of Unicef's Food Conservation Division, articulated Unicef's programmatic priorities at an FAO meeting. Sabin sequestered their aid into three categories: maternal and child health (MCH), disease control, and nutrition. On the nutrition front, he aptly and accurately cited the five foci of their work: "feeding programmes for children and mothers; milk conservation; development of other protein-rich foods; aid for nutrition education to be effective at the village level and to stimulate self-help; and salt enrichment for goitre control."⁴⁴ In practice, the nutrition programme overlapped with MCH, whose major interest was in thousands of rural health centres. Sabin's remarks well illustrate how nutrition had become a centrepiece of the Unicef programme and had been redirected to the youngest, most vulnerable children in developing countries.

The transformation of programmatic policy from school children to young children reflects a milestone in the application of nutritional scientific observations -- which had for at least three decades empirically identified infants and small children as being particularly vulnerable -- to programmes. For Scrimshaw it proved to be the first demonstration of his ability to influence and alter policy. In his words, "The first major policy change [in this nutritional history] was Unicef's shift away from the school child toward the weaning child".⁴⁵ Weaning itself quickly became a central element of new nutritional research and policy. In developing countries in the years after the war, breastfeeding was still the ^{feeding} method of choice for children up to three years of age.⁴⁶ Jelliffe and others were attracting concern for breastfeeding itself, particularly in the developing world. While Jelliffe had noted the need for a weaning food in his classic 1953 text on infant nutrition, he had become increasingly concerned with the failure of mothers to breastfeed altogether.⁴⁷ Breastmilk provides nutritional

⁴³*Expansion of Unicef Aid to Maternal and Child Nutrition*, op. cit., note 39 above, p. 9.

⁴⁴Donald R. Sabin, *An Outline of the World of the United Nations Children's Fund*, presented to the Consultative Sub-committee on Surplus Disposal, FAO, Washington, D.C., 6 February 1958, Unicef Archives, Sabin papers, p. 2.

⁴⁵Nevin S. Scrimshaw, interview, 26 July 1995. Carpenter notably overlooked the role of weaning in the development of protein science. While he mentioned the development of specific weaning foods, he failed to note how debate about protein malnutrition rippled outward from the lack of a protein-fortified weaning food in the developing world.

⁴⁶There are a number of important articles in *Women and Children First*, particularly those by Richell, Gaitskell, Smith, and Peretz, that provide relevant background on the pre-W.W.II propensity to address weanlings' health. Valerie Fildes, Lara Marks, Hilary Marland (eds), *Women and Children First: International maternal and infant welfare 1870-1945*, London, Routledge, 1992.

⁴⁷For a brief summary of Jelliffe's views on this topic, see: D. B. Jelliffe, 'Breast Feeding in Technically Developing Regions', *Courier*, 1956, VI(4), pp. 191-5.

benefits to a growing, extremely vulnerable child. From the colostrum, or first milk, which contains antibodies, to the composition of ordinary breastmilk, which is loaded with essential nutrients and protective factors, breastmilk is a super infant food. In areas where water and food supplies are contaminated by bacteria and parasites, breastmilk often provides the only safe nutrition to needy children. Williams and other field staff in developing countries had frequently commented on the improved health seen in the children who breastfed for the longest periods of time. However, it had also been noted that one of the most critical times in the life of child -- if not the most critical time -- was at weaning. At weaning, a growing child accustomed to healthy mother's milk must make the transition to the local food provided. In many cases the local food cannot compete nutritionally with mother's milk. Furthermore, ingestion of contaminated substances leads to chronic diarrhoea and infection in most very poor children. It was with this intimidating and overwhelming litany of problems in mind that new researchers in the developing world became increasingly frustrated and eager for solutions.

Protein Science and Weaning Foods: Children Come First

Unicef's shift toward weaning children reflected the broader movement in the late-1950s to allocate scientific personnel and resources to protein malnutrition in children under five and in appropriate weaning foods. WHO, FAO, and the PAG provided much of the scientific, and frequently financial, thrust that was required. At the fifth meeting of the Joint FAO/WHO Expert Committee on Nutrition in 1957, protein malnutrition figured prominently into discussion, in no small part due to the election of William Darby, the head of the PAG, as chairman of the session.⁴⁸ The committee determined that FAO and WHO had followed three stages in its research on protein malnutrition, the first two consisting of field surveys and analysis of the problem. With those near completion, according to the committee, FAO and WHO had moved into stage three which involved the implementation of preventive measures, particularly the supplementation of children's diets with "protein-rich foods other than milk".⁴⁹ WHO had a crystal-clear platform for its support of these foods: "Where protein malnutrition is caused by the inability of the people to obtain a suitable protein-rich food, the solution must lie in finding a cheap source of such a food."⁵⁰

⁴⁸*Joint FAO/WHO Expert Committee on Nutrition*, op. cit., note 19 above, p. 3.

⁴⁹*Ibid.*, p. 20.

⁵⁰*The First Ten Years of the WHO*, op. cit., note 2 above, p. 311.

In a scientific study typical of the period, four prominent Indian nutritionists affiliated with WHO and based at the widely-recognized Nutrition Research Laboratories in Coonoor, South India, conducted a protein malnutrition survey of poor children under five years of age and identified the detrimental and often fatal roles of diarrhoea, kwashiorkor, and marasmus during weaning. Significantly, the authors noted that kwashiorkor and marasmus accounted for a total of 2.7% of clinically-determined cases of illness while diarrhoea accounted for 20%.⁵¹ These figures reflected, however, hospital or in-patient admissions and therefore could not be used as indicators of actual prevalence in the population. It was further observed that diarrhoea and other gastro-intestinal infections could be highly correlated with kwashiorkor.⁵² This framing of nutritional questions in terms of kwashiorkor throughout dozens of similar studies highlighted the need for a high-protein weaning food. The language of protein malnutrition had become synonymous with that of kwashiorkor, and the perception of the needs of afflicted children created an atmosphere that pushed for solutions to this problem.

Since officially the MCH projects were considered one major component of hunger programmes, it is poignant that weaning foods were generally seen as the foundation for related projects. Thus, mothers were viewed as child-bearers and child-providers. As much as some researchers promoted the health of women, their health was usually passed over for the more appealing topic of what mothers could learn or do for the health of their children.⁵³ Several studies during the decade investigated the chemical composition of breastmilk, in part to determine whether a woman's health status affected the quantity or quality of breastmilk. For the most part, no overtly detrimental correlation could be found.⁵⁴ This is not said to discount the important work researchers conducted to determine ways to improve child health through educating or providing health care for mothers, but rather, to highlight how malnutrition itself broadly concerned itself at this time with children, not adults.

⁵¹K. Someswara Rao, M. C. Swaminathan, S. Swarup, V. N. Patwardhan, 'Protein Malnutrition in South India', *Bulletin of the World Health Organization*, 1959, 20, 603-39, on p. 603. Rao and Patwardhan were, incidentally, on the Fifth Joint FAO/WHO Expert Committee on Nutrition. Patwardhan was a member while Rao served on the secretariat. See: *Joint FAO/WHO Expert Committee on Nutrition*, op. cit., note 19 above, p. 2.

⁵²Rao et. al, op. cit., note 51 above, p. 633.

⁵³See, for example: *Joint FAO/WHO Expert Committee on Nutrition*, op. cit., note 19 above, pp. 46-49. A few investigations did reveal that maternal nutritional status might not vastly affect the quality of breastmilk. This no doubt led to a de-emphasis of programmes that specifically designated maternal nutrition as a priority.

⁵⁴See: Bhavani Belavady and C. Gopalan, 'Chemical composition of human milk in poor Indian women', *Indian Journal of Medical Research*, March 1959, 47(2), pp. 234-45.

In a limited distribution report on MCH programmes in 1957, among other topics such as weaning foods and the PAG, Pate stressed methods for improving nutrition at the village level, a topic of discussion annually since 1954 at Unicef. In addition to "increasing the effectiveness of milk distribution by associating it with appropriate education in nutrition", he harped on the need for a concentration on nutrition in villages where, to date, public health interventions had been limited to agricultural and economic improvements along the lines of FAO's food supply policy.⁵⁵ Unicef's ideology had clearly shifted dramatically from just five years earlier when relief was the nucleus of policy. In 1957, Unicef was taking seriously the task of impacting children's lives by addressing nutritional problems on a community level. However, practically the concept of high-protein weaning foods had aroused Unicef's attention. Heyward in particular had become exceptionally interested in the industrial development of these foods and guided Unicef toward their production.⁵⁶

Nevin Scrimshaw and Incaparina

Scrimshaw's work was significant in great part because of his prolific publications and close relationship with the PAG, FAO, and WHO.⁵⁷ FAO had placed research assistance into protein-rich foods for mothers and children at the top of its agenda and planned in particular, in 1956 and 1957 to focus on fish flour and oil-cake flours such as cottonseed. Its 1955 Conference report predicted an expansion in this type of work co-ordinated with and funded in part by Unicef.⁵⁸

Scrimshaw's experience with weaning foods is important not only because his empirical observations were popular among researchers, but because his related work informed UN policy.⁵⁹ From the beginning of his nutritional work, virtually coinciding with the formation of WHO, FAO, and Unicef, Scrimshaw had increasingly expanded his connections within the very small network of nutritional experts. Such was the case that "When Frank Clements was the head of nutrition [at WHO]...in

⁵⁵*Expansion of Unicef Aid to Maternal and Child Nutrition*, op. cit., note 39 above, p. 7.

⁵⁶Charles Egger, interview conducted by John Charnow, 26 October 1983, Unicef Archives, interview file, p. 2.

⁵⁷Nevin S. Scrimshaw, interview, 18 July 1995.

⁵⁸*Report of the 8th Session of the Conference 4-25 November 1955*, Rome, FAO, March 1956, pp. 118-19.

⁵⁹Writing years after these events, Les Tepley, Unicef's senior nutritionist, commented that outside of immediate staff, Scrimshaw and Darby (the first head of the PAG) were the key players internationally and in Unicef's own protein work. See: Les Tepley, letter to E.J.R. Heyward, 2 December 1983, Unicef Archives, CF-NYH-09R.H1/C/02.09, 88R025, box 1988-T006.

1949...and I was just starting INCAP...he said to me 'The thing that you can do which would be the greatest contribution to nutrition in the world would be to develop a practical, low-cost weaning food' and I didn't forget that."⁶⁰ Indeed, Scrimshaw did not forget. Clements' words were a mantra for Scrimshaw. He filtered much of what he saw and read through them. They were certainly ringing in his head when, in Guatemala, he and his colleagues

began to see these cases [of malnutrition] coming in and then tried to determine what we could tell the mother. And we found that sometimes mothers would bring children like this to the clinic and the physician would say, 'Give the child milk', and the mother of course couldn't afford the milk in the quantity and quality needed but would try to comply and put a teaspoon full of milk in a glass full of water. Then the child would come back and the doctor would say 'well I told you to give the child milk', and the mother would say 'well I did give the child milk but he got worse' -- or she simply wouldn't come back either because the child died, which was most common, or because the doctor didn't give her any advice that she could follow. Okay, well, doctor's stupid.⁶¹

In Scrimshaw's mind, however, the problem was far from one of medical stupidity -- though that certainly had a role in these affairs. Medical doctors in hospitals and clinics could, with relative ease, be retrained to listen better to patients and provide more practical advice about feeding and averting malnutrition. But what of the mothers who had no opportunity for medical advice and attention? These troubled and inspired Scrimshaw the most:

Well, so then you're stopped on the roadside with a woman with a child in her arms who obviously is on the verge of full blown kwashiorkor and is going to die unless he gets some protein and what do you tell that mother? We know we couldn't tell her to get milk, and we knew the problems with giving legume, and we knew that we couldn't give more corn; and the whole family had a few ounces of meat a week...and even there there was the feeling that the man needed it for work...it was very very frustrating and that was when, remembering what Clements had said, I started to see what we could do.⁶²

⁶⁰Nevin S. Scrimshaw, interview, 18 July 1995.

⁶¹Ibid.

⁶²Ibid.

Scrimshaw's anecdote highlights a number of extremely important issues in nutritional history. It sums up the frustration shared by many doctors in developing countries of all too frequently having no sound advice to give mothers in order to prevent childhood mortality. Scrimshaw elucidated how, as a researcher and head of a major nutritional institute, he was inspired to find a solution, literally and figuratively. That it was Clements who recognized the problem prior to Scrimshaw and encouraged his work in Guatemala reflects the frequently unofficial or certainly unwritten ways in which policy makers interacted with science.

In many regions of the world researchers conducted work analogous to Scrimshaw's. However, the attention and momentum that INCAP built for a weaning solution does stand apart from similar ventures. Béhar, then a newcomer to INCAP, believed that "something was necessary for children who could not have milk. We didn't want it to be food distribution. We felt it should be something people could buy by themselves. We were convinced some people could not afford it, but the solution was for them to on their own move out of poverty."⁶³ INCAP spent years tracking down a suitable weaning food. The first problem -- a source of protein -- was the greatest impediment. Scrimshaw related how soon after his expression of interest in a weaning solution, he considered soy in the form of soy milk as a possible source. The private sector wasted no time in following up on his interest:

Well at that time there was a soybean association that was anxious to supply initial quantities and so on and...as far as I could tell at the time, the efforts to grow soy in the tropics had failed and the prospects that soy would be available in Central America seemed in the foreseeable future to be remote and making these countries dependent on an imported product didn't seem to me a service.⁶⁴

Thus Scrimshaw was thinking in very practical terms about a low-cost milk substitute. He found other seeds had major drawbacks as well. Sesame shattered when harvested, and peanuts were prohibitively expensive. It was then that he and his colleagues

found that there were large amounts of cottonseed meal being shipped to Germany and to Europe for animal feeding. Well when we looked into the cottonseed we found the protein was fine but it had a toxic pigment, gossypol, which could kill non-ruminants if there was too

⁶³Moisés Béhar, interview, 29 December 1995.

⁶⁴Nevin S. Scrimshaw, interview, 18 July 1995.

much of it incorporated in the feed and obviously this wasn't the kind of thing that you wanted to feed to infants.⁶⁵

Not surprisingly, Scrimshaw found wide support in the PAG for attempts to remove the gossypol from the cottonseed. The PAG set an acceptable level for gossypol and helped facilitate the interaction of Aaron Altschul, a United States Department of Agriculture chemist and protein expert based in New Orleans, with INCAP during May 1959. For Scrimshaw and his colleagues, the patient and attentive Altschul provided a major breakthrough: "Aaron showed them [cotton oil mill operators] that if they added holes to keep the temperature down and they operated the press at a lower speed so it didn't heat up so much, then most of the gossypol could go into the oil and that could be cleaned up by refining".⁶⁶ Altschul himself felt inspired by the whole process and noted, after seeing children being given the INCAP mixture, that he could "see why pressure exists to make this mixture a practical reality in Central America."⁶⁷ Altschul identified four mills -- one in Guatemala, two in El Salvador, and one in Nicaragua -- that could produce the cottonseed flour with sufficiently low levels of gossypol.⁶⁸ Economic and implementational concerns aside, he considered the transformation needed at these mills as the sole impediment to making INCAP Mixture 9, a high-protein food, practical.⁶⁹ As a result of Altschul's mechanical insight, INCAP had the opportunity to develop, on a wide-scale, a seemingly practical high-protein milk substitute called Incaparina.⁷⁰

Altschul interestingly noted that mixture 9 should be viewed as "essentially a new product, and should not be defined simply as a mixture of the ingredients. We might even say that this cooked product may be to the mixture as a mixture of atoms is to a chemical product."⁷¹ Altschul's remarks are emblematic of his concern that the mixture could conceivably have deleterious effects on its recipients and of the hyper-scientific manner in which researchers were framing this formula. By viewing it chemically -- a necessary procedure in order to assure its efficacy -- researchers

⁶⁵Ibid.

⁶⁶Ibid.

⁶⁷Aaron M. Altschul, *Report by Aaron M. Altschul of observations made during travel in Central America May 10th to 22nd, 1959*, INCAP, INCAP 1-78, Scrimshaw Archives, p. 1.

⁶⁸Ibid., p. 2.

⁶⁹Ibid., p. 4.

⁷⁰The etymology of Incaparina is rather interesting. In Spanish, the word for flour is harina, thus the 'arina' in Incaparina. INCAP scientists considered the need to give the weaning solution a palatable name. Incaparina is produced to this day in Central America.

⁷¹Altschul, op. cit., note 67 above, p. 6.

boosted the mixture's status to a medicinal level, thereby unintentionally reinforcing the view that hunger, a sickness, must have a cure. This view could be heard in the conclusion of Altschul's report: "The development of an all-vegetable food that is capable of having the same protein nutritive value as an animal protein mixture represents a type of sophistication which is no different than the sophistication which has marked the advance of society from time immemorial."⁷² The substantial march of progress, in the minds of many researchers, would be able to dampen, if not eradicate, the miseries that had always plagued humankind. The optimism at INCAP was sufficiently intense to promote similar projects world-wide.

PAG Optimism

While WHO, FAO, and Unicef struggled within themselves to provide assurance that their projects were, in fact, making a tangible difference, the PAG leadership expressed tremendous confidence in its mission and impact. Many of the PAG members worked in related capacities on other committees such as the Committee on Protein Malnutrition which was sponsored by the Rockefeller Foundation and the National Academy of Sciences-National Research Council.⁷³ György, King, Sebrell, and Darby, all founding members of the PAG, sat on this committee which, in tandem with the PAG, emphasized the need for high-protein weaning foods for international nutritional improvement. The committee worked most closely with the PAG, but also had liaisons with WHO, FAO, and Unicef. In a report to the Rockefeller Foundation in 1958 the Committee on Protein Malnutrition sought to elaborate on the use of a \$250,000 grant received earlier and pave the way for an additional grant of \$300,000. The grant proposal contained the authors' infectious enthusiasm for protein research: they alerted the Rockefeller Foundation to the research grant having been used "only in connection with a broadly conceived world-wide program aimed at increasing the supply of safe and nutritionally adequate protein foods for the most vulnerable groups".⁷⁴ The report further trumpeted success in demonstrating the use and practicability of vegetable protein food mixtures in

⁷²Ibid., p. 9.

⁷³The PAG lobbied the Rockefeller Foundation to make a grant in 1956 to the US National Academy of Sciences for weaning food research. The Committee on Malnutrition (part of the Academy), working with the PAG (after all, the members were the PAG), administered the grant. See: 'Review of the Organization's programme in nutrition, 1948-1964', op. cit., note 4 above, pp. 19, 20.

⁷⁴W. H. Sebrell, W. J. Darby, G. A. Goldsmith, P. György, C. G. King, 'Report to the Food and Nutrition Board by the Committee on Protein Malnutrition', 31 October 1958, Unicef Archives, CF-NYHQ-05ANS-002.

developing countries, particularly in the treatment and prevention of kwashiorkor.⁷⁵ Such findings led the committee to optimistically assert that their research would result in a "maximum return" which would be seen in practical plans and programming.⁷⁶

The underlying power of the PAG was that its membership swelled during the late-1950s to include the top nutritionists from developing countries -- all of whom shared a concern for weaning foods. The PAG members believed, largely due to Scrimshaw's work on Incaparina, that weaning foods using locally available sources and modern scientific techniques, could have an impact on protein malnutrition. Not everyone agreed, however, that these formulas held the key to arresting protein malnutrition. Even during the PAG's embryonic stage, Burgess, the WHO Nutrition Section Chief, and Aykroyd had commiserated over the overly-optimistic hopes pinned to protein-rich foods. Aykroyd wrote to Burgess:

I am fully in agreement that the FAO/WHO/Unicef program concerned with the processing of presscakes and other protein-rich foods will not go very far in solving the problem of protein malnutrition among children throughout the world...As far as FAO and WHO are concerned, activities in this particular field form only a relatively small part of our total nutrition program, a fact which Unicef has sometimes found difficulty in grasping.⁷⁷

Although such pessimism surfaced from time to time, generally, protein mixtures attracted an enthusiasm absent from other nutritional undertakings.

Malnutrition and Infection

Since its first two reports, the Joint FAO/WHO Expert Committee on Nutrition had stressed the need for greater knowledge of the interactions between nutrition and infection. By 1957 the topic had returned to prominence as concern mounted about the role of this relationship in the development of protein malnutrition.⁷⁸ The flurry of viewpoints in the scientific press ranged from advocacy of rapid treatment of infection and malnutrition in order to improve health, to the possibility that a poor diet might actually **help** a person ward off infection. Such

⁷⁵Ibid., p. 4.

⁷⁶Ibid., p. 3.

⁷⁷W. R. Aykroyd, letter to R. C. Burgess, 15 November 1956, FAO Archives, Nutrition Division Director's Office Files (Aykroyd).

⁷⁸See: *Joint FAO/WHO Expert Committee on Nutrition*, op. cit., note 19 above, pp. 35-6.

divergent perspectives, particularly the latter, inspired a few researchers to uncover a reasonable explanation of the complex interactions of infection and nutrition.

In the early-1950s, Scrimshaw had an interest in this troubling interrelationship: "I started writing very early that infection was just as important a control of malnutrition as nutrition itself".⁷⁹ Scrimshaw's first investigations into the nature of malnutrition-induced morbidity and mortality inspired numerous other groundbreaking studies at INCAP. The four-village study of 1955 found that thirty percent of children on public records were listed as dying from infective and parasitic diseases when, in fact, most of them were dying from kwashiorkor and from diarrhoeal dehydration.⁸⁰ In the mid-1950s, Scrimshaw was telling colleagues around the world that infection was a key precipitatory factor in the onset of kwashiorkor. According to Scrimshaw, Gopalan from India and Hegsted from Harvard told him that they had not seen adequate evidence to support the hypothesis. Scrimshaw found such comments frustrating and provocative since

here we could see literally with our eyes the relationship between an episode of diarrhoea or measles and kwashiorkor and we systematically showed that every one of the communicable diseases of childhood, measles, German measles, whooping cough, could in the right circumstances, precipitate kwashiorkor, and we never saw kwashiorkor that wasn't associated with infection.⁸¹

By the late-1950s, Scrimshaw's colleagues were recognizing correlations between malnutrition and diarrhoea. Since diarrhoea had long been recognized as a primary cause of death in children under five, this connection figured deeply into researchers' interests.⁸²

In 1957 Scrimshaw first contacted John Gordon, the head of epidemiology at the Harvard School of Public Health, to discuss malnutrition and infection. Together with Carl Taylor, also a professor at the Harvard School of Public Health, they set out to review the frequently contradictory medical investigations on the interactive roles of nutrition and infection. Their search initially confusingly showed that "many of the important infections of human populations are rendered more serious in their

⁷⁹Nevin S. Scrimshaw, interview, 26 July 1995.

⁸⁰Béhar et. al., op. cit., note 38 above, p. 1099.

⁸¹Nevin S. Scrimshaw, interview, 26 July 1995.

⁸²See: R. C. Burgess et. al., 'Informal meeting of advisers on nutrition research, Geneva, 11-13 March 1959: report to the Director-General', Geneva, WHO, 14 April 1959, MHO/PA/86.59, LSHTM Archives, WHO reports box, pp. 11-12, 17-18.

consequences by the presence of malnutrition; that a few infections are indeed less severe when associated with nutritional deficiency; and that many infections themselves precipitate nutritional disturbances."⁸³ That these three apparently sound results occurred suggested to the authors that they should reconsider the fundamental structure of their conception of nutrition and disease.

Scrimshaw, Taylor, and Gordon proceeded with their investigation and methodically reviewed mounds of data about the relationship between malnutrition and different types of infection. Taylor recalled that as they went through roughly 3000 publications, nutritionists consistently argued for nutritional interventions as a "silver bullet" for controlling infections. Conversely, the communicable disease specialists noted in their publications that infection control was a good method for controlling malnutrition. The importance of their comprehensive survey was, Taylor said, that "until our work nobody was putting those two observations together."⁸⁴ Their sweeping review, ^{*Interactions of Nutrition and Infection*} revealed that nutritional deficiency appeared to be associated with increased resistance to viral and protozoan infections, probably due to the infectious agents' reliance on host cell processes. However, malnutrition frequently seemed to lower resistance to infection from "rickettsial, bacterial and helminth infections."⁸⁵ Thus they showed nutritional deficiency usually decreased resistance to infection, a notion that had been conventional wisdom for decades. They referred to this relationship as being "synergistic" -- malnutrition helped along the infection. In rare cases, the relationship between malnutrition and infection was defined as "antagonistic" because malnutrition actually decreased the likelihood of infection, often by impairing absorption. The vast majority of studies that they examined made use of laboratory animals and the strength of their conclusions drew mainly from the superimposition of the laboratory findings on widely-observed interactions in humans.

The investigators also turned to the far less discussed issue of the detrimental influence of infection on nutritional status, which they also considered to be a synergistic relationship. Much empirical data had shown that kwashiorkor often occurred in children just after an acute infection, most commonly diarrhoea or measles. These along with protozoan infections were shown to exacerbate nitrogen losses and accelerate the appearance of protein deficiency.⁸⁶ Although the researchers could not

⁸³Nevin S. Scrimshaw, Carl E. Taylor, and John E. Gordon, 'Interactions of Nutrition and Infection', *The American Journal of the Medical Sciences*, March 1959, 237(3), 367-403, on p. 367.

⁸⁴Carl Taylor, interview, 26 June 1996.

⁸⁵Scrimshaw et. al., op. cit., note 83 above, p. 389.

⁸⁶*Ibid.*, pp. 391-95.

conclusively assure their colleagues that malnutrition was bad for infection and vice-versa, they presented a "working generalization" that deleterious interaction -- synergism -- was the "dominant interaction".⁸⁷ In a remarkable call for reasonability on this point, they wrote, "No competent observer can witness the deaths from seemingly trivial infection of malnourished persons in technically underdeveloped areas...without realizing that large numbers of people are dying from infections ordinarily not fatal."⁸⁸ They therefore concluded that public health programmes addressing either problem had to take into consideration the interdependency between these factors.

Beyond the investigators' generalizations, the researchers were formulating other hypotheses about the cause of kwashiorkor and how nutritional programmes should be structured differently. In 1958 INCAP investigators had noted that diarrhoea and other infectious diseases appeared to be the precipitating cause of kwashiorkor.⁸⁹ According to Scrimshaw, the crux of their thinking was that diet alone was not responsible for the onset of kwashiorkor. Rather, a number of stresses seemed related and these fell into five categories: 1)anorexia, the drop in appetite precipitated by infections 2)the tendency of mothers to withdraw solid food if the child had diarrhoea or symptoms of the disease, and in their place give watery gruels or sugar water (or nothing) 3)chicken pox and other childhood communicable diseases 4)parasites and 5)diarrhoea, whose effects resulted in negative nitrogen balance.⁹⁰ This hypothesis was nothing less than a revolutionary notion, though it was not well known at the time.

One of the long-range effects of Scrimshaw's, Gordon's, and Taylor's publication, 'Interactions of Nutrition and Infection', was its influence decades later on child survival programmes.⁹¹ As far as the current analysis is concerned, one of the key elements of this work was that, like so many other studies, it emphasized the supreme importance of protein over calories.⁹² Although Scrimshaw's, Gordon's, and Taylor's findings were monumental, it took nearly a decade and a WHO monograph for their hypotheses to be disseminated widely. In the meantime, however, their initial

⁸⁷Ibid., p. 395.

⁸⁸Ibid., pp. 395-96.

⁸⁹Béhar et. al., op. cit., note 38 above, p. 1097.

⁹⁰Nevin S. Scrimshaw, interview, 26 July 1995. See also: Nevin S. Scrimshaw, Dorothy Wilson, and Ricardo Bressani, 'Infection and Kwashiorkor', *The Journal of Tropical Pediatrics and African Child Health*, 1960, 6(2), pp. 37-43.

⁹¹This is a fruitful topic which has to-date been wholly unexplored.

⁹²Scrimshaw et. al., 'Interactions of Nutrition and Infection', op. cit., note 83 above.

work inspired a landmark study in Guatemala that was conducted between 1959 and 1964 and which will be described in the next chapter. While the relationship between malnutrition and infection may appear intuitive, the establishment of a scientific basis for this thinking and for understanding its ramifications took considerable resources. As late as 1960, nutritional experts readily acknowledged that "The full significance of this interrelationship between malnutrition and infection, as it influences the severity and lethality of disease, is only now beginning to be realized."⁹³

The Population Problem

At the end of the 1950s, an emerging awareness of the detrimental relationship between hunger, malnutrition, and population increase was reflected in public health conceptions of root problems in developing countries. Although Orr had expressed concern over population increases a decade earlier, further discussion within FAO and other agencies was stifled until the end of the decade. Then, words such as the following were more frequently heard at administrative meetings: "The rapid increase in population now taking place in most parts of the world made it urgently necessary that nutritional requirements should be estimated as accurately as possible and taken into account in formulating food supply targets."⁹⁴ International food congresses were incomplete without major papers presented on the latest demographic statistics and their grim ramifications for nutrition planning.⁹⁵ The American Public Health Association in 1959 released a policy statement calling for increased research and action on population increases and epitomized progressive medical sentiment in the following statement:

There is today an increase of population which threatens the health and well-being of many millions of people. In many areas of the world substantial population increase means malnutrition and outright starvation...No problem-whether it be housing, education, food supply, recreation, communication, medical care-can be effectively solved

⁹³Report to the Director-General, a document prepared by WHO consultants', 9 May 1960, Geneva, WHO, MHO/PA/66.60, LSHTM Archives, WHO reports box, p. 3. Participants and consultants included György, King, Platt, Sebrell, Scrimshaw, Dean, and Patwardhan.

⁹⁴*Report of the 9th Session of the Conference, 2-23 November 1957*, Rome, FAO, 1958, p. 50.

⁹⁵See: Byron T. Shaw, 'Prospective world production and distribution of food', pp. 373-77, and James Bonner, 'The world's increasing population', pp. 369-72, in *Proceedings of the Fifth International Congress on Nutrition*, Washington, D.C. September 1-7, 1960, *Federation Proceedings*, March 1961, Supplement no. 7.

today if tomorrow's population increases out of proportion to the resources available to meet those problems.⁹⁶

Unicef was well aware of the problems the population explosion in underdeveloped countries presented. Heyward commented that Unicef's impressive establishment of one thousand rural health centres annually was perhaps reaching thirty million people -- the same number of people born into poverty annually. Soberingly, Heyward declared that "though the international aid certainly is valuable in its indirect effects, by improving quality, quantitatively the countries being assisted are not making a net improvement in the availability of health services - a backlog of some 1,000,000,000 people unserved remains about constant."⁹⁷ Heyward further noted that the increasing population made nutritional programmes still more difficult to implement though milk conservation (milk processing equipment), "expanded aid to nutrition" (later called applied nutrition programmes), and child feeding remained priorities. Ever the realist, he despondently stated that most Unicef-sponsored programmes were "demonstrations rather than efforts to cover countries with adequate services."⁹⁸ Heyward's concern reflected how population had become an additional variable in the effort to stem and ultimately vanquish hunger. The political momentum toward programmes that were self-replicable came in great part to the revelation that no UN agency would ever be capable of directly reaching more than a small percentage of hungry people on the planet. In essence, policy makers sought to transform their original vision of development, well summarized in the proverb, "Feed a man a fish and he eats for a day, teach a man to fish and he eats for a lifetime." Knowing that they lacked the personnel and resources to teach all "men" how to fish, they adopted a new approach: "Teach a man to teach others how to fish and no one will go hungry."

Nutrition Education

Since the early days of Cicely Williams and others, field workers in developing countries had been citing ignorance as a root cause of malnutrition in children. Many posited that if only people could be taught what to eat, what to grow, and how to

⁹⁶'Policy Statements', *American Journal of Public Health*, 1959, 49(12), 1702-4, on p. 1703.

⁹⁷E. J. R. Heyward, 'The Real Problems of Unicef', New York, Draft copy, 15 December 1959, Unicef Archives, CF/HST/1985/034/Anac 03/01, p. 2.

⁹⁸*Ibid.*

prepare their meals, their hunger would be ended. Prior to the 1950s, however, the concept of nutrition education was far too esoteric to find its way into tangible programmes. FAO had made the greatest effort to incorporate such programmes into practical aid. In 1950 FAO published a pamphlet, *Teaching Better Nutrition*, which at the very least highlighted organizational interest in the issue. Even here, however, nutrition education programmes per se were of secondary importance when compared to the role of expanded food production.⁹⁹ The fourth meeting of the Joint FAO/WHO Expert Committee on Nutrition in 1954 set broad guidelines for nutrition education and training which it reiterated in 1957 and 1961. The foundation of their alienating advice was that only people interested in learning and innovating would use education actively, therefore, "it is better to concentrate the educational effort on the receptive few-leaving the rest to follow their example-than to spend much time and energy on persuading the reluctant to learn."¹⁰⁰ Unicef was only then beginning a major retraction of resources from rescue and catastrophic operations and turning its attention to long-term means to promote sustainable health. Nutrition education stood out from a number of options since it did not necessarily involve huge supplies of food and resources. Furthermore, intellectually it appealed to policy makers as a plausible means for empowering people on an infinitely important issue: their health. Perhaps the greatest force behind nutrition education was the belief -- pervasive at the time -- that while food scarcity and poverty generally caused malnutrition, ignorance also played a significant role.¹⁰¹ All too often, however, nutrition education utilized little relevant or important information and merely promoted the consumption of more milk.¹⁰²

Beginning in the late-1950s, consultants and full-time staff at WHO, FAO, and Unicef, increasingly investigated the efficacy of nutritional education interventions. At least initially, Aykroyd found himself overwhelmed by the issues involved. In 1956, he remarked on the state of nutritional education affairs: "Unicef now seems to be thinking largely in terms of education in nutrition. The thinking has not gone very far. In fact, at the moment it can fairly be said that no-one [sic] has very clear ideas as to

⁹⁹See J. A. S. Ritchie, *Teaching Better Nutrition*, Washington, D.C., H. K. Press for FAO, 1950, p. 1.

¹⁰⁰Joint FAO/WHO Expert Committee on Nutrition, *Report on the Fourth Session*, Rome, FAO, FAO Nutrition Meetings Report Series no. 9, July 1955, p. 49.

¹⁰¹Nutrition literature is peppered with comments to this effect. For example, see: 'Report to the Director-General', op. cit., note 93 above, p. 3.

¹⁰²Arthur Robinson, 'Practical and Policy Aspects of Unicef Assistance to Programmes for Improved Nutrition', 1961, Unicef Archives, CF NYHQ-05AT.

how a large sum of money could be usefully spent in this field."¹⁰³ Aykroyd and others were not so concerned about the approaches and techniques required for nutrition education as they were with their application in developing countries.¹⁰⁴ Jelliffe, whose previously illuminating work on infant nutrition has been mentioned, also consolidated many of his interests and concerns in education. He believed that well-planned nutrition education which researched local customs and designed means to alter behaviour, particularly in relation to infant feeding, could be successful. Nevertheless, he was concerned with one aspect of such programmes that would come to play heavily in the dialogue on this issue: evaluation. Jelliffe and his colleagues feared that assessing the impact of educational interventions would be the most difficult part of the process. According to one article he and a colleague published, evaluation of nutrition education on some level was required "if the blind, self-perpetuating delusion and ill-directed effort, aptly termed 'directionless activity pursued for its own sake', is to be avoided."¹⁰⁵

Believing ^{the dissemination of knowledge of} nutrition to be a key to nutritional advances, Unicef embarked on nutrition education as an organizational prerogative in 1954. The Executive Board approved an assistance programme calling for education on child feeding and child care and an embryonic programme to support local efforts for improved food production and child nutrition. In 1957 the Board reinvigorated the initiative and expanded funding.¹⁰⁶ While politically these developments sparkled during the end of the decade, their programmatic structure would not be arranged until the early-1960s and will be treated in Chapter V. At the end of the decade, nutrition education mainly involved the provision of films and texts to provide practical recommendations about grass-roots changes families could make to improve their nutritional status. WHO identified maternal and child health centres as the ideal site for nutrition education.¹⁰⁷

¹⁰³W. R. Aykroyd, letter to R. C. Burgess, 15 November 1956, FAO Archives, Nutrition Division Director's Office Files (Aykroyd).

¹⁰⁴Ibid.

¹⁰⁵D. B. Jelliffe and F. J. Bennet, 'Nutrition Education in Tropical Child Health Centres', *Courrier*, 1960, X(9), 569-73, on p. 573. Ironically, years later an FAO nutrition worker assessing the nutrition education programmes of the 1960s and 1970s lamented that there had been little evaluation of FAO's technical assistance on training and nutritional education and "few projects collected systematically even simple data that would have served for evaluation." Jean W. McNaughton, 'A Review of FAO's Activities in Nutrition Education and Training 1949-1977', paper presented at International Conference on Nutrition Education, Oxford, 31 August-7 September 1977, Unicef Archives, PR-NU-002, p. 5.

¹⁰⁶Robinson, op. cit., note 102 above.

¹⁰⁷*The First Ten Years of the WHO*, op. cit., note 2 above, p. 316.

The FAO/WHO role in education projects was to provide technical approval of Unicef-initiated programmes.¹⁰⁸ With the continuation of the gigantic milk powder feeding programmes -- albeit linked to education -- effective nutrition policy remained an abstraction. All agencies consistently noted that milk programmes were unsustainable and had only short-term benefits, often even when coupled with education. To this end, Aykroyd, FAO's nutrition head until 1960, believed that "a great deal of malnutrition is due not so much to lack of the right sort of foods, as to failure to make good use of the foods which are available."¹⁰⁹ Thus the feeding supplementation programmes in developing countries might best be viewed as an extension of European emergency feeding services -- the same services that had originally inspired funding for Unicef and UNRRA. Even with education, the grave problems that the nutritionists faced all too often seemed irreconcilable. Although they could make short-term improvements, they acknowledged their failure to assure sustainability and to reach large populations. Education seemed a plausible solution, but still more was required.

Applied Nutrition Programmes

In 1957, Unicef began promoting applied nutrition projects (ANPs), a medley of nutrition education, training, and schemes for improving production of protective foods locally.¹¹⁰ The programmes received considerable attention and financial support from Unicef and FAO during their first years in part because of their new-found commitment to sustained development projects. In an ANP, a community nutrition worker might, hypothetically, enter a village, teach the people about childhood protein needs and train them in the construction of fish ponds. One of the intended results would be a community-wide initiative for developing a locally cultivable protein resource. The idea behind applied nutrition programming stemmed from the search for other means of channelling high-protein foods to young children. By encouraging local legume and cereal production, in addition to other protein sources, applied nutrition sought to introduce locally-available supplements to breastmilk.¹¹¹ Scrimshaw attributed excitement for applied nutrition to the increasing interest in kwashiorkor during the late-1950s. According to him, "breastfeeding was

¹⁰⁸Robinson, *op. cit.*, note 102 above.

¹⁰⁹See: W. R. Aykroyd, 'FAO and Nutrition', 1959, LSHTM Archives, FAO pamphlet box, p. 5.

¹¹⁰'Milestones in Unicef's History 1946-1985', January 1986, Unicef Archives, PR-NU-001, p. 3.

¹¹¹Egger, *op. cit.*, note 24 above, p. 5.

pretty much taken for granted at first because in all the countries [in which] we were working mothers were breastfeeding, but...with applied nutrition programs you could have models, and international agencies provided training...and we all felt very good about them...you could show some clear improvement".¹¹² Heyward, then Deputy Director of Unicef operations, felt that the stimulus at Unicef for applied nutrition programming came from his collaboration with Aykroyd and Autret at FAO. In Heyward's estimation, the concept of applied nutrition addressed the persistent development problem of improving food access on a family level: the main cause of malnutrition.¹¹³

At the LSHTM, Platt was training field workers in applied nutrition, a move stemming from his recognizance "that malnutrition is not just a matter of having too little to eat".¹¹⁴ He firmly promoted programmes that took all aspects of life into consideration; from maternal education to communal responsibility, Platt invoked a developmental methodology that perpetually seemed just out of the reach of the UN agencies. His views were grounded in the grammar of academia as well as in practical experience, and this ensured his position as an important force in policy. However, being an academic, his philosophy was often difficult to translate into the practical programmes organizations like Unicef so fervently desired. His ideas were frequently double-edged: on one hand they were sufficiently rational to implement, while on the other they inspired cynicism. According to one of Platt's colleagues in London, Professor Phillip Payne, Platt was frustrated by his profession's obsession with protein and believed "that because of the metabolic interaction between protein and energy sources, and in addition the complication of the effects of zymotic diseases, it was simplistic to attempt to prove that there were two separate and independent syndromes, one specific to protein deficiency [kwashiorkor] and another for energy deficiency [marasmus]".¹¹⁵ Platt's disappointment with this simplification led him to advocate alternative measures for addressing hunger problems. In a lengthy comment that reflected the complexity of the problems policy makers like Heyward and Aykroyd faced, Platt wrote, "The prevention of malnutrition is primarily a socio-economic matter and although help is needed from the doctor, the teacher, the agriculturalist and others, it is only when their specialist knowledge is integrated by

¹¹²Nevin S. Scrimshaw, interview, 26 July 1995.

¹¹³E. J. R. Heyward, interview, 12 September 1995.

¹¹⁴B. S. Platt, 'The prevention of malnutrition', March 1958, London, Applied Nutrition Unit, LSHTM Archives, Platt files, p. 2.

¹¹⁵Phillip Payne, letter to Anne Hardy, 10 January 1995.

wise administration into an overall programme for the benefit of the community, that real progress can be made."¹¹⁶ Few public health professionals knew how to follow such overwhelming prescriptions.

In spite of Heyward's interest in applied nutrition, it was not until 1959 when the U.S. was forced to cut off abruptly its enormous supply of dried skim milk that developing countries and international agencies were encouraged to experiment with other methods of improving their inhabitants' nutritional status.¹¹⁷ The U.S. dried skim milk powder suspension was assumed to be a permanent change in U.S. policy. Pate explained to the Unicef Executive Board that the change had been prompted by improved sales of the powder for other uses that had legislative priority. The immediate result spelled disaster for many of the Unicef programmes approved for 1959 since forty percent less milk -- nearly 55 million pounds -- would be available. For Pate, the news must have been felt acutely since he had virtually founded Unicef a decade earlier on the basis of milk distribution programmes. In a letter to the Board, although Pate expressed deep concern for the ramifications of the loss on school feeding -- then still the recipient of half these supplies -- he was far more distraught about pre-school children who had a "nutritional priority" and would nevertheless have a major reduction in their supply.¹¹⁸ Although initially the supply cessation came as an unwelcome shock to the Executive Board, it soon helped underline for Unicef and for the countries themselves just how unsustainable and ultimately damaging reliance on one major subsidy for health programmes could be. Furthermore, the shortage provided increased fuel for the development of protein mixtures.¹¹⁹ Just before this halt, Unicef was distributing milk powder to the following: eleven African countries, eight Asian, eight Middle Eastern, and twenty-six in the Americas. During the first six months of 1959, Unicef estimated that daily, over five million mothers and children received milk.¹²⁰ Pate in 1960 notified the Executive Board that the surplus milk shortfall had a silver lining: "One of the positive results of the jolt we have all received about milk supplies is the greater interest among departments of governments in many

¹¹⁶Platt, op. cit., note 114 above.

¹¹⁷Robinson, op. cit., note 102 above.

¹¹⁸Maurice Pate, letter to the members of Unicef Executive Board, New York, 22 October 1959, Unicef Archives, 88R025, box T006.

¹¹⁹*Report of the 10th Session of the Conference 31 October - 20 November 1959*, Rome, FAO, 1960, p. 129.

¹²⁰Arthur Robinson, letter to Miss Winifred Salisbury, 10 September 1959, Unicef Archives, CF-NYHQ-05AT. For additional confirmation of this shift, see: Donald Sabin, 'Implementation of the WHO/FAO/Unicef Protein-Rich Foods Program', in *Proceedings of Conference On Soybean Products for Protein in Human Foods*, 13-15 September 1961, pp. 15-26, on p. 16.

countries to pursue" other means of delivering high-protein foods to pre-schoolers.¹²¹ The "jolt" could not have come at a better time. Scrimshaw, Jelliffe and others were bringing to light evidence that many of these programmes in Central America were having an undesirable health effect. Mothers were diluting the milk with too much water and the water was often contaminated. Moreover, it came to Unicef's attention that in order to heat the milk still served in some schools, families had to spend precious hours collecting firewood to fuel the fires.¹²² In too many areas, milk feeding had become a disaster, and Heyward was "horrified" to learn of it. Unicef rapidly was "weaned off milk" distribution and moved on with its other nutritional projects.¹²³ Interestingly, Care came to usurp Unicef's position in milk distribution and perpetuated many of the negative effects of this programme.¹²⁴

FAO, WHO, and Unicef: Troubled Colleagues

FAO, WHO, and Unicef were frequently portrayed in popular periodicals of the 1950s as super organizations seeking to put an end to humankind's legacy of misery and hunger. In their superficial interactions, the organizations wished to cast a smooth humanistic finish on the nature of their respective work and inter-agency co-operation. Although the historical record -- inter-agency correspondence, oral histories, and board reports -- highlights notably serene co-operation among these agencies during their first years, this positive image deteriorated by the end of the 1950s, especially in relation to FAO and Unicef. This may in part be understood by considering the forces these agencies addressed during their initial years. Unicef struggled to simply exist through 1953 while it, along with FAO and WHO, dealt with major crises in Europe. In a search for institutional *raison d'être* that ensued during the mid-1950s, well-established institutional egos began to clash.

One instance which was emblematic of the conflict between FAO and Unicef occurred during 1955 and 1956 when the agencies were discussing plans for a FAO liaison nutrition officer for Unicef. Initially, the controversy seemed insignificant since different views on responsibilities of the officer were smoothed over by alterations in the post's description. However, Aykroyd wrote to Heyward in February 1956 that

¹²¹Maurice Pate, 'Statement by Maurice Pate to the Executive Board of Unicef', 14 March 1960, E/ICEF/60A/CRP/6, p. 3.

¹²²Nevin S. Scrimshaw, interview, 25 July 1995.

¹²³E. J. R. Heyward, interview, 12 September 1995.

¹²⁴Moisés Béhar, interview, 29 December 1995.

the differences between the agencies were hardly over semantics: "The major differences stem from the approaches to the problem of child nutrition adopted by FAO and Unicef respectively".¹²⁵ In Aykroyd's view, Unicef had exhausted its potential impact in its pursuit of milk supplementation and conservation programmes. Areas that then lacked conservation simply did not have the pasture or cattle needed to embark on such programmes. Moreover, Aykroyd prophesied that the dried skim milk supplies Unicef utilized could soon be significantly diminished and thereby compromise the content of these programmes. He believed that it would behoove Unicef to de-emphasize school feeding programmes and instead to examine opportunities for high-protein vegetable mixture development. Overall, Aykroyd asserted that the main difference between FAO and Unicef on child nutrition issues was that Unicef had a narrow interest in the development and distribution of supplementary foods while FAO conceived of such projects as a small part of the whole. Unicef, Aykroyd asserted, had to "adapt the Unicef policy and program to the real situation with respect to child nutrition, i.e. to discover how Unicef can most effectively utilize its resources in this field."¹²⁶ For support, Aykroyd cited comments from Pate and Heyward that Unicef nutritional work was retarded in comparison to its other health contributions. Aykroyd's commentary well elucidates the severe policy and programmatic issues Unicef faced during the late-1950s in regards to its nutrition programme. On the one hand, Unicef relied on its past success in the field of milk supplementation, while on the other, it hesitantly looked at the intimidating options on the horizon. Aykroyd condescendingly noted that yaws and malaria treatment and prevention, conducted with WHO aid, were considerably simpler undertakings compared to programmes for malnutrition in children.¹²⁷ During his last years at FAO, Aykroyd's lashing criticism of Unicef became increasingly bitter. In a confidential note to the Deputy Director-General of FAO in 1958, Aykroyd insisted that "the Unicef secretariat does not, in my view, fully understand the complexity of nutrition projects, probably comparing these with health projects of a relatively straightforward and simple nature."¹²⁸ In the same note, he complained that too often FAO received the blame for WHO's foibles. Recently the FAO Nutrition Division had been criticized for

¹²⁵W. R. Aykroyd, letter to E. J. R. Heyward (Deputy Director of Unicef), 24 February 1956, UN Archives, CF 9D 79, folder A023, Heyward file, p. 1.

¹²⁶*Ibid.*, p. 4.

¹²⁷*Ibid.*

¹²⁸W. R. Aykroyd, letter to F. T. Wahlen, 3 July 1958, FAO Archives, Nutrition Division Director's Office Files (Aykroyd).

holding up projects, when, according to Aykroyd, the wait for WHO approval had caused the delays.¹²⁹

Financial jealousies also roused FAO's anger toward Unicef and WHO. Autret, Aykroyd's deputy, wrote a meticulous financial analysis of Unicef expenditures up to 1956. In it, he emphasized that half of Unicef's budget was directed at medical projects assisted by WHO. In contrast, Unicef allocated a mere 12% of its budget to FAO-supported projects. Autret moaned that "Unicef funds should be more equally distributed between programmes increasing (human) reproduction and (food) production."¹³⁰ In Autret's view, FAO's Nutrition Division had to make receipt of increased Unicef funds a top priority and seek to do so by proposing new programmes.¹³¹

FAO and WHO relations on nutrition issues were never quite as stormy as those between FAO and Unicef. Nonetheless, in March 1959, FAO and WHO felt compelled to produce and affirm a "Gentlemen's Agreement" that stipulated their individual and mutual responsibilities for work on nutrition.¹³² Although the document was not meant as a rigid framework for allocating nutritional responsibilities, it did identify a "lead" agency for ten nutritional fields. According to the agreement, WHO was to be primarily responsible for the nutrition of pregnant and lactating women, infants, and children.¹³³ FAO's sphere of concern, on the other hand, included food consumption assessment, national food and nutrition policy establishment, and supplementary school feeding.¹³⁴ Any anxieties this agreement may have initially quelled, resurfaced rapidly. In October, Dr. Abraham Horwitz, the Director of the Pan American Health Organization, acquainted Candau, WHO's Director-General, with FAO's tendency to appoint medical personnel to posts in Latin America. According to Horwitz, medical doctors were infringing on WHO's sphere of responsibility by over-emphasizing the medical aspects of their work rather than focusing on areas such as food storage, distribution, and production. Moreover, these doctors were having discussions with health authorities and were failing to apprise WHO of the contents of

¹²⁹Ibid.

¹³⁰M. Autret, letter to F. L. McDougall, 1957, FAO Archives, 57.4C2, p. 2.

¹³¹Ibid., pp. 2-3.

¹³²The responsibilities of FAO and WHO', op. cit., note 9 above.

¹³³Ibid., p. 7. A few years later, the agreement continued to be cited as the comment on divisional responsibilities. See, for example: Marcel Autret, 'Nutrition of the pre-school child: a consideration of new approaches', 15 July 1963, Unicef Archives, 88R025, box T-006, Teply files.

¹³⁴The responsibilities of FAO and WHO', op. cit., note 9 above, pp. 4-8.

these contacts.¹³⁵ This criticism hit WHO deeply. In December, P. Dorolle, WHO's Deputy Director-General, informed the FAO Deputy Director-General that "Unfortunately some developments seem to suggest that our efforts in defining the roles of WHO and FAO have not yet had the desired effect".¹³⁶ Evidently, the issue of responsibility for nutrition in the field had not been resolved.¹³⁷

The establishment years earlier of prerequisite inter-agency co-operation, had by 1959 created waves of animosity between administrators at FAO and Unicef. Since Unicef had been required to obtain FAO technical approval on projects, there had been weighty questions about which organization should be responsible for related funding. According to Heyward, Phillips in particular at FAO, viewed Unicef as an easy source for technical funding support. Unicef did not have a problem with turning to FAO for general technical information about nutrition programmes -- in that respect FAO seemed competent. The cause for conflict was that every Unicef project, before being implemented, had first to clear FAO. At FAO the proposal would be passed to every department remotely related and which usually included MCH, Nutrition, and another division. Heyward saw how programmes designed from a country level were then criticized by FAO personnel who had no experience in that country and wrote in consultancies for their own technical staff (whose expenses had to be covered by Unicef).¹³⁸ Heyward wrote of this predicament that technical approval for all projects had "served as an excuse for agencies to give far too little general guidance about meeting children's needs in the fields of health, nutrition, social services, etc."¹³⁹ As research needs increased, Unicef asserted that FAO should be covering a greater share of projects that Unicef did not necessarily deem important.¹⁴⁰

In September 1959 Unicef Executive Director Pate declared that financial problems had "come to a head" in great part because of FAO's declining budget and

¹³⁵Abraham Horwitz, letter to M. G. Candau, 30 October 1959, WHO Archives, folder 1, box A.0918.

¹³⁶P. Dorolle, letter to Dr. Norman Wright, 7 December 1959, WHO Archives, folder 1, box A.0918.

¹³⁷These concerns arose occasionally during the next decade. Although in 1964 FAO's Director-General wished to re-open the subject, Candau, WHO's Director-General, wrote to discourage him. Candau believed that the 1959 agreement had been fine and "that the agreed arrangements should be interpreted by our staffs in a spirit of goodwill and mutual cooperation." M. G. Candau, letter to B. R. Sen, 29 June 1964, WHO Archives, folder 1, box A.0918.

¹³⁸E. J. R. Heyward, interview, 12 September 1995.

¹³⁹E. J. R. Heyward, 'Notes on history of Unicef "policy"', 17 March 1965, Unicef Archives, CF/HST/1985/034/Anac 03/11, p. 3.

¹⁴⁰B. R. Sen, FAO letter to Ministers of Agriculture, no. 71, June-July 1959, UN Archives, CF 9D 79, folder A023, Heyward file.

Unicef's disproportionate expansion.¹⁴¹ As a result, FAO's Finance Committee formulated what Pate debasingly called a "theory". The Committee stated that Unicef-initiated projects requiring support from the Technical Assistance Fund, staffed in part by FAO, should be fully funded by Unicef.¹⁴² In other words, Unicef should be held accountable for any FAO technical costs incurred in relation to Unicef projects. This development contrasted directly with a host of FAO Conference and Council statements during the previous decade to the effect that the two organizations should collaborate on malnutrition issues that faced people in developing countries. Further complicating the matter was the arrangement by which Unicef rarely had to assume technical costs incurred in joint work with WHO.¹⁴³

Superficially, this funding conflict appears to have been nothing more than a struggle for each organization to evade financial expenditures that seemed best subsumed by its counterpart. A dissection of the rhetoric in this unusually sharp conflict between the two organizations reveals deeper ideological rifts which festered and returned during the following decades. In part, the central issue was one of independence as both organizations fiercely defended their right to pursue the work identified by their executive bodies (and presumably, their constitutions). In 1959, FAO's Nutrition Division noted that Unicef's practice of unilaterally initiating discussions with governments was not workable. Any such contacts should, according to FAO, be planned mutually from the earliest stage.¹⁴⁴ FAO had been reviled to hear that a UN Economic and Social Council delegate voiced concern over the possibility that Unicef, with its financial largesse, could conceivably "dictate the developments of the activities of other organizations and the expenditure of their funds."¹⁴⁵ Unicef countered that such a possibility could not come to pass but rather, that its agency concerns meshed with a substantial portion of FAO's mission and should therefore work in partnership.

FAO at times held Unicef in low regard, as reflected in the derogatory commentary of Nutrition Division staff. During meetings at Unicef headquarters to discuss a complex project, one FAO staff member remarked that "the main attention

¹⁴¹Maurice Pate, 'Relations between Unicef and FAO', 21 September 1959, UN Archives, CF 9D 79, folder A023, Heyward file, p. 1.

¹⁴²Ibid.

¹⁴³'FAO/Unicef relations: discussions between the Director-General of FAO and the Executive Director of Unicef', 13 March 1960, UN Archives, CF9D 79, A027.

¹⁴⁴'The technical approval of Unicef-supported projects', 1959, FAO Archives, Nutrition Division Director's Office Files (Aykroyd). The rhetoric of this paper suggests that it may well have been written by Aykroyd.

¹⁴⁵Pate, *op. cit.*, note 141 above, p. 6.

was directed at such questions as whether 3 jeeps or only 2 could be supplied in accordance with the regulations...Unicef seems to have the idea that all difficulties will be automatically solved by the simple increase in the nutrition staff available to FAO and WHO for dealing with Unicef-assisted projects."¹⁴⁶ Such animosity arose frequently, often exacerbated by FAO's frustration with the low interest expressed by developing country governments, as well as other FAO divisions themselves, to seek nutrition advice. Although FAO Conference meetings consistently reflected a desire on the part of Aykroyd to step up FAO's work on nutrition for mothers and children, these longings were often skirted for the sake of other more enticing FAO projects.¹⁴⁷ As FAO fiscally neglected the Nutrition Division, FAO administrators wished for Unicef to take up the financial slack. The Deputy Director-General of FAO wrote Pate:

we are always glad to see additional resources being made available by Unicef for work which is so much in line with the aims and objectives of our Organization. We are, however, bound to consider the effect of the use of these additional resources on our own program and budget. Unless such additional resources can be matched by increased resources for FAO's part of the work, there is the risk that we may either have to alter our own program or become your Achilles heel!¹⁴⁸

If Unicef wished to expand its programming in nutrition, it had to be prepared to pay for FAO's complementary support. Unicef only reluctantly provided temporary funding to FAO which FAO considered vital for Unicef work to "be on a sound technical basis", and FAO's Conference in December 1959 still found itself largely at odds with the Unicef Executive Board.¹⁴⁹

In March 1960, the respective heads of FAO and Unicef, B. R. Sen and Pate, met to discuss the increasingly tenuous situation between them. Pate argued strongly that FAO should not have a different financial arrangement with Unicef than WHO did

¹⁴⁶"The technical approval of Unicef-supported projects", *op. cit.*, note 144 above, p. 11.

¹⁴⁷Aykroyd, though a fine nutritionist, may not have had the political verve to push his ideas through the system. Autret recounted that "Aykroyd once told me that he didn't like tough discussions and that he would prefer that I speak because he would rather not deal with conflict." Marcel Autret, interview, 14 April 1996.

¹⁴⁸Norman C. Wright, letter to Pate, 25 August 1959, Nutrition Division Director's Office Files (Aykroyd) 2/2, pp. 2-3.

¹⁴⁹Excerpt from Report of Commission II as adopted by the Tenth Session of FAO Conference, Rome, November 1959 in E/ICEF/59-C/CRP/2, pp. 1-4. While Heyward and his colleagues fumed, Unicef continued for several years with this arrangement. Heyward, 'Notes on history of Unicef "policy"', *op. cit.*, note 139 above, p. 7.

while Sen claimed that FAO's weak financial status necessitated this unique position.¹⁵⁰ Sen and Pate were unable to resolve their differences and did not need to at the time since Unicef's Executive Board had already agreed to provide temporary funding for FAO through 1961. The financial disagreement between the two agencies on one level demonstrates how for these bureaucracies ideological concerns and conceptions of how best to help hungry people were highly influential. FAO de-emphasized the Nutrition Division itself and tried to focus resources on other areas such as animal husbandry, food technology, and reforestation. Unicef, in contrast, placed increasing trust in the ability of nutrition programmes that dealt directly with issues -- protein malnutrition, food preparation, nutrition education -- to affect change.

Of Experts and Excoriation

Although this dissertation has not included in its scope the results of policy changes in New York, Geneva, and Rome in the field, it is important to relate some of the currents which ebbed at the doors of the policy makers in order to have a richer image of their position. In this context, Robinson's documents and a few oral histories are enlightening. Robinson was highly sceptical of the abilities of experts -- from FAO and WHO in particular -- to solve problems in the field or even accomplish anything noteworthy. He included one vitriolic attack in his regional newsletter to headquarters:

'An expert', goes an unofficial U.N. definition, 'is one whose ignorance has been organized'. We [in the field] are free to admit our own unorganized ignorance of many of the new and specialized fields into which Unicef is beginning to move, but we would plead with both experts and policy makers to approach with humility the problems of applying their own more highly organized ignorance to new areas, new countries and new situations.¹⁵¹

Robinson summed up the profound ill will field officers and staff had for both the recommendations of their superiors, and their perceived unconstructive relations with experts. His is not a view easily distilled from policy texts, committee meetings, expert groups, or conferences. It is, however, a view that starkly contrasts with the perspectives of the experts and the policy makers for it illuminates the apparent

¹⁵⁰'FAO/Unicef Relations', op. cit., note 143 above.

¹⁵¹Arthur Robinson, 'Area Office for Northern South America', Report #13, March-June 1958, Unicef Archives, CF-NYHQ-05AT, p. 3.

ignorance which may have been their central shortcoming. Margaret Gaan, a Unicef programme officer and director for over two decades, while speaking of her time in the field in Thailand, described the FAO and WHO personnel as having unearned halos around their heads and believing their advice to be untouchable. In her experience, "What the agency [FAO and WHO] people said was right and so many times the Unicef people weren't prepared or were too innocent to fight with them."¹⁵²

Two Unicef colleagues-in-bureaucracy did not take such a strong view of experts' advice. Charles Egger, the Unicef Director for Africa, Europe, and the Eastern Mediterranean throughout the 1950s, believed that criticism of experts had to be considered in the broader scientific context. From Egger's vantage point in Paris, "everybody believed [during the 1950s] in the success of modern scientific advances without much regard for the sociological and cultural environment."¹⁵³ This environment aside, John Grun, a Unicef worker for three decades, felt that many experts simply fell short of personal expectations imposed on all people. Grun stated: "I have known experts who were first-class, top-level guys, who were no use whatsoever in the field because, and it was years ago that I said it for the first time, 'If you send us an expert, don't send us the best; send us the guy who is half an expert and half a communicator.'...if you can't communicate, you're a dead loss."¹⁵⁴ A rare admission of culpability by one WHO bureaucrat suggests that Unicef staff's criticism was on target. Milton Seigel, the Assistant Director-General of WHO in charge of administration and finance for three decades, admitted that quality aside, WHO forced too many experts on Unicef. According to him, Unicef's administrators had told WHO that they were using more experts than necessary and in response, WHO acted childishly and increased the number of experts.¹⁵⁵ Unlike FAO, however, WHO quickly resolved its problems with Unicef.

For Unicef administrators and policy makers, the transition toward a broader understanding of public health was slowly in progress. At first, training workers in

¹⁵²Margaret Gaan, interview conducted by John Charnow, 21 November 1983, Unicef Archives, interview file, p. 9. Similar views were echoed in one of FAO's own publications. In *FAO's Role in Rural Welfare*, the author gloomily reported: "I heard of several instances of misjudgement or ignorance of local conditions among experts of international agencies that, frankly, seem to me incredible." H. S. Cruz, *FAO's Role in Rural Welfare*, Rome, FAO, 1959, C59/5, p. 124.

¹⁵³Charles Egger, interview conducted by John Charnow, 11 October 1983, Unicef Archives, interview file, p. 16.

¹⁵⁴John Grun, interview conducted by Herman Stein, 12 December 1983, Unicef Archives, interview file, p. 21.

¹⁵⁵Milton Seigel, interview conducted by John Charnow, 11 May 1984, Unicef Archives, interview file, pp. 17-18.

Western techniques was considered "sufficient", and the notion that doctors, buttressed by nurses and sanitarians, were invulnerable, was prevalent.¹⁵⁶ Thus, when Robinson and other programme administrators preached to headquarters that countries and even communities had individual needs which could only be addressed locally, their words probably fell on deaf ears. Robinson's following comment likely had few admirers at headquarters: "the application of policy could be more effective if there were less of 'what is sauce for the goose is sauce for the gander' and more of 'one man's meat is another man's poison'".¹⁵⁷ Robinson's concern for specialization eventually came to the fore at the close of the decade, and Egger readily pointed out that such realizations did not come solely through WHO experts, but rather, from experienced African and European doctors and public health workers.¹⁵⁸

For the interests of this dissertation, this commentary highlights key points that colour much of the history before us. Firstly, they underline the existence of true agency-wide international policies.¹⁵⁹ Although administrators in central offices often saw themselves only as implementing projects, they were, in fact, passing along policy that set a tone for work in the field and identified a distinct ideology. Secondly, these comments show how the ideal of individually autonomous projects, tailored to local needs, could not possibly be accounted for by broad organizational policies. All too frequently, when projects were filtered through the agency experts and made their way to the field, their impact was stifled by inappropriate directives.

A Step Back: An Examination of Nutrition Philosophy

By and large the 1950s were a tremendously productive and groundbreaking time for hunger-related research. By the middle of the decade, FAO, WHO, and Unicef were positioned for the first time to implement earnestly anti-hunger efforts in developing countries. Many of these activities initially paralleled vertical programmes that had been popularized in Europe after W.W.II and which had had two prerogatives: feed the hungry and heal the sick. As researchers increasingly realized that the relatively fleeting hunger seen in Europe was chronic for the majority of

¹⁵⁶Egger, *op. cit.*, note 153 above, p. 16.

¹⁵⁷Robinson, *op. cit.*, note 151 above, p. 3.

¹⁵⁸Egger, *op. cit.*, note 153 above, p. 18.

¹⁵⁹George Beaton, a nutrition consultant for many years, wrote me that he questioned whether such a thing as international nutrition policy existed. G. H. Beaton, personal correspondence, 2 November 1995. E. J. R. Heyward has posed the same question. E. J. R. Heyward, interview, 12 September 1995.

people in developing countries, they slowly changed their tactics. Unicef, which had begun then famous milk feeding programmes in Africa, Asia, and Latin America, during the early-1950s, found its programmes of limited, and at times negligible benefit. It is notable that the shift toward horizontal programming was, in the eyes of some, a logical step that did not necessarily devalue vertical approaches. Gaan held this viewpoint: "The problems that were solved by vertical programmes were so great that until you got them out of the way the other problems didn't surface enough to be clearly studied."¹⁶⁰ Gaan's remark, however, applied specifically to disease-oriented campaigns, not to the initially vertical nature of nutritional campaigns.

Two strains of project methodology emerged from agency cognizance of the benefits of a horizontal approach. In the first, FAO, WHO, and Unicef nutrition researchers and policy makers acknowledged the inability of milk alone to stem protein malnutrition in children in developing countries. They therefore propelled forward plans for alternative protein foods. Essentially, this modification in methodology -- from feeding children milk to developing and utilizing milk substitutes -- was not a major philosophical departure for the parties involved. Whether Incaparina or milk, the central tenet sought to provide malnourished children with the protein they required. The second strain marked a substantive transformation in approach. It involved an acknowledgment on the part of nutrition workers that feeding alone could not solve any nutritional problems; in fact, it could worsen them. Thus, new methods had to be devised to promote sustainable changes in the nutritional status of mothers and children. These novelties came under a number of headings, nutrition education and applied nutrition being the most prominent. Underlying these approaches was the sobering realization on the part of development agencies that they could never feed all children and therefore must find another route to see that children were well fed. However innovative, this methodology relied on a prefabricated focus, often predetermined by joint discussions with WHO and FAO. Headquarters maintained considerable control over the implementation of projects, and field autonomy was restricted.¹⁶¹ As a result, many programmes had a two-dimensional, vertical nature and a history of success in developed countries. Egger summarized this ideology: "as we were moving towards the 1960s, one thought, by introducing appropriate techniques that have proven themselves in Western countries, that this could be relatively easily translated and applied to developing countries."¹⁶²

¹⁶⁰Gaan, *op. cit.*, note 152 above, p. 5.

¹⁶¹Egger, *op. cit.*, note 153 above, p. 21.

¹⁶²Egger, *op. cit.*, note 24 above, p. 5.

It should be noted that outside of its support for the PAG, WHO nutritional work was minimal in contrast to its joint efforts with Unicef to combat tropical disease. In addition to providing limited support to nutrition institutes in Cairo and Teheran, WHO staff worked mainly on training paramedical and auxiliary personnel in medicine, with some element of nutrition included. Apart from joint participation in numerous technical committees, regional conferences and technical courses, FAO/WHO joint nutritional work was minor.¹⁶³ In 1958 WHO's primary nutritional policy was "to increase its activity in the field of nutrition".¹⁶⁴ In 1959 a small group of experts, all well-known nutritionists -- Cruickshank, Darby, Hundley, Platt, Sebrell, Holt and Burgess -- advised the WHO Director-General of areas in which WHO should pursue nutritional research. Most importantly, they highlighted how medical developments had made major accomplishments in the control of nutritional diseases such as beriberi, pellagra, rickets, scurvy, and goitre, and stressed the accomplishments of a disease-based approach that viewed nutritional problems as diseases that could be controlled or treated. In this context, however, neither they nor anyone was capable of pointing to the control of hunger in relation to protein and calories as an accomplishment of their work. Thus, this group acknowledged the need for WHO nutrition research in this area to consider the "total food supply" and to separate itself "from investigations conducted merely as a part of the problem of a specific disease or group of diseases".¹⁶⁵ The translation of this directive into methodology called for an expanded focus which contradicted other WHO recommendations.

A report virtually contemporaneous with the one just cited, and written rather ironically by many of the same researchers, cheered WHO research that could identify specific nutritional diseases and their causes rather than invoking the broad heading, "nutritional research".¹⁶⁶ The report lamented how classic epidemiological investigations were not being thoroughly applied to nutritional diseases in under-developed countries. The writers seemed confused themselves as to what type of studies they wished to see since they noted how investigations into the aetiology of a disease such as kwashiorkor, far from requiring a concrete epidemiological approach, needed to examine "cultural, social, psychological, as well as disease factors."¹⁶⁷ Among the clear signals that could be detected from WHO's policy recommendations

¹⁶³See: Aykroyd, *op. cit.*, note 109 above, p. 7.

¹⁶⁴*Report of the Nutrition Committee for the Middle East*, *op. cit.*, note 28 above, p. 52.

¹⁶⁵Burgess et. al., *op. cit.*, note 82 above, pp. 3-5.

¹⁶⁶'Report to the Director-General', *op. cit.*, note 93 above, p. 3.

¹⁶⁷*Ibid.*, p. 4.

was that nutritional diseases -- PCM included -- like any other disease, could be investigated, attacked, and eradicated.

FAO, in contrast to WHO, continued to examine nutrition as it pertained to food availability and consumption and maintained a significantly less optimistic viewpoint.¹⁶⁸ Its staff surveyed countries for food consumption data and further investigated human nutritional requirements. Along with the PAG it continued its protein-rich food programme, all the while recognizing that in addition to maternal nutrition education, the solution to protein malnutrition "lies in the greater production and consumption of ordinary foods which supply" protein.¹⁶⁹

Robinson lucidly expressed the crashing of these currents in several of his facetious and informal office reports for the northern South America office. Robinson had a flair for articulating the concerns that plagued policy makers and field workers alike. Waxing on Unicef's illustrious history, Robinson recounted how the Unicef symbol for most people had been "the picture of child with a cup of milk".¹⁷⁰ In Robinson's mind, however, "the historical reasons which led Unicef to stress feeding programmes have lost their value" and Unicef had become "less interested in programmes which provide no more than temporary alleviation of a need, and more interested in programmes which provide long term improvement or...solution of a problem."¹⁷¹ Robinson further asserted that the long-term value of milk programmes was "doubtful" and the reliance on foreign supplies unwise.¹⁷² Thus he suggested a shift toward the new keys in nutrition: education, community activities, and small, replicable projects. Based on Robinson's previous communications, it seemed Unicef could adapt to these changes. A year earlier, after home leave and meetings with "policy makers" at headquarters, he reasoned that "Unicef policy is a dynamic thing. What was forbidden yesterday may today be merely frowned upon, permitted tomorrow and encouraged the next day; or sometimes it is the contrary."¹⁷³

While the explosion of new programmes to treat hunger in developing countries came as welcome news to many in the development community, others saw recent developments as band-aids that obscured the true problems which were to be

¹⁶⁸FAO's disappointment with progress against global malnutrition inspired the Freedom From Hunger Campaign (FFHC) which will be described in the following chapter.

¹⁶⁹See: Aykroyd, op. cit., note 109 above, pp. 1-7.

¹⁷⁰Arthur Robinson, 'Area Office for Northern South America', Report #16, April-June 1959, Unicef Archives, CF-NYHQ-05AT, p. 1.

¹⁷¹Ibid., p. 1.

¹⁷²Ibid., p. 2.

¹⁷³Robinson, op. cit., note 151 above, p. 1.

confronted. In a confidential memo to the Unicef Executive Board titled 'The Real Problems of Unicef', Heyward noted that the Unicef Board spent far too much time working on unreal problems while the funds were put to work sluggishly. Among their problems was the failure to allocate funds rapidly enough to make a difference (and avoid a surplus), a position that would have been unconscionable a decade earlier given Unicef's then unstable financial situation.¹⁷⁴ Heyward's concerns were powerful forces for organizational change at Unicef. In 1959, the UN reflected its support for the shift toward children in its November 'Declaration of the Rights of the Child' which asserted that "the child shall have the right to adequate nutrition".¹⁷⁵ The decade had thus seen a number of critical shifts -- scientific and ideological -- that led toward absolute concern for the "child". Nutrition policy, while not leaving behind protein food interests and milk conservation, came to incorporate several other headings during the early 1960s. Iodine, iron, and vitamin A deficiencies, applied nutrition, nutrition training, and other points of study merged with the increased concern for pre-school children to present a more diversified framework for fighting malnutrition. This agency-wide broadening of focus and its associated ramifications will comprise the following chapter's discussion.

¹⁷⁴Heyward, op. cit., note 97 above, pp. 3-4.

¹⁷⁵'Unicef's part in the development decade, 1960-1964', 30 October 1964, Unicef Archives, CF/HST/1985/034/anac 03/10, p. 23.

Chapter V

A Vision Revisited

Had Alfred Nobel been born, not in 1833 but even in 1965, in a steamy, isolated village of Asia, Africa, [or] Latin America, what would be his chances of survival and of success?

Henry R. Labouisse, Executive Director of Unicef, on accepting the Nobel Peace Prize for Unicef, 10 December 1965¹

Fighting Hunger

With the beginning of the 1960s, the fight against hunger was injected for the first time since Orr with a burst of idealism hailing from many sources: President Kennedy in the White House and his hunger-concerned adviser George McGovern, Unicef's Nobel Peace Prize in 1965, and B.R. Sen at FAO and his Freedom from Hunger Campaign (FFHC). The notes these groups struck during the first years of the decade alluded to Orr's endeavours at the end of the 1940s and Roosevelt's advocacy of Freedom from Hunger as one of the Four Freedoms. Politics and pragmatism on nutritional issues collided and produced ambiguous results. The U.S. and other developed nations eagerly promoted plans to distribute their food surpluses through the developing countries in order to foster democracy and emerging markets while nutritionists and policy makers recognized the need for country-based programming for long-term development. According to one member of the U.S. Congress excited over the Food For Peace programme, American agriculture could be greatly expanded "so as to make food a major weapon in the fight for peace."² As U.S. politicians were advocating food distribution for spreading democracy and in the hope that developing countries "will become dollar customers as their economies improve",³ agency administrators such as Donald Sabin, then the Unicef food conservation co-ordinator, were stating that while many technical problems then had solutions, "Applying and

¹Henry R. Labouisse, 'Acceptance speech, Nobel Peace Prize', Oslo, 10 December 1965, in John Charnow and Sherwood G. Moe (eds), *Henry R. Labouisse, Unicef Executive Director, 1965-1979*, New York, Unicef, 1988, CF/HIST/MON/88-011, p. 16.

²Robert W. Kastenmeier, letter to Mr. Maurice Pate, Washington, D.C., 28 March 1962, UN Archives, CF-NYHQ-09.P, DSU: CF/NYHQ/EXD/PRO, folder D0405.

³See: Nelson J. Post, 'Food For Peace: plans and objectives', in *Proceedings of Conference on Soybean Products for Protein in Human Foods*, Peoria, Illinois, 13-15 September 1961, 21-25, on p. 24.

adapting these solutions" had become the focus of their work.⁴ Black, in her history of Unicef, called the 1950s a time for assailing communicable diseases like malaria, tuberculosis, yaws, and syphilis. In contrast, the 1960s, dubbed by the UN as the first UN development decade, represented an "international crusade to bring to an end centuries of rural stagnation and neglect."⁵ The spirited idealism that reshaped the basic contours of hunger issues generally came from the policy makers and not from the scientists and nutritionists. While policy makers praised nutritionists for their past identification of protein deficiency in weanlings and development of protein-rich foods, they began an inconspicuous withdrawal from their earlier days of reliance on technicians for solutions and turned to other methods.⁶

Crucially new in nutrition policy from the early-1960s at both FAO and Unicef was active interest in the notion of national nutrition planning. At the Fifth International Congress on Nutrition, B. R. Sen, FAO's Director-General, asserted that FAO's role in nutrition was to "indicate the changes in food supply and consumption needed to make deficient diets more satisfactory for health."⁷ Further, he explained that FAO would work with countries on national food and nutrition policies that reflected these plans. FAO had begun to de-emphasize localized nutrition programmes per se, and had concluded that only national planning had the strength to promote substantial change, since hunger and "hidden hunger" were overwhelming the lives of billions of people. FAO used the term "hidden hunger" to describe a non-clinical state of hunger in which a person did not receive the recommended intake for nutrients but did have adequate intake to avoid clinical symptoms of deficiency. We have already heard some of the symptoms attributed to this non-medical hunger -- when publications and speakers mentioned people who were not well nourished enough to solve their own problems, they were referring to this nebulous disease.⁸ Out of his desire to attract attention to hidden hunger and national planning projects, Sen, from

⁴Donald R. Sabin, 'Implementation of the WHO/FAO/Unicef Protein-Rich Food Program', in *Proceedings of Conference on Soybean Products for Protein in Human Foods*, Peoria, Illinois, 13-15 September 1961, 15-20, on p. 20.

⁵Maggie Black, *The Children and The Nations: The Story of Unicef*, Hong Kong, Unicef, 1986, p. 17.

⁶See: Maurice Pate, 'Statement at the 6th International Congress on Nutrition, Edinburgh, 9-15 August 1963', August 1963, Unicef Archives, 88R025, Box T-006, Teply files.

⁷Binay Ranjan Sen, 'Problems of food and nutrition-views and programs of FAO', in *Proceedings of the Fifth International Congress on Nutrition*, Washington, D.C. September 1-7, 1960, *Federation Proceedings*, March 1961, Supplement no.7, 384-86, on p. 384.

⁸See: Ritchie Calder, 'Food as a function of history', in *Proceedings of the Sixth International Congress of Nutrition, Edinburgh, 9-15 August 1963*, Edinburgh and London, E. & S. Livingstone LTD., 1964, 444-48, on p. 446.

his pulpit atop FAO, in 1960 launched the FFHC, a world-wide attempt to bring the world's obfuscated nutritional problems into focus and address them.

Unicef's approach to national nutrition planning differed dramatically from FAO's. After a review of MCH services in 1960, Unicef increased emphasis in MCH services on integration of nutrition into broader health services such as immunization. At that time, Unicef estimated that its MCH programmes, including nutrition and health projects, were benefiting 56 million children and nursing or pregnant mothers.⁹ Nevertheless, for Unicef's administrators, programmes that held the promise of only reaching a small percentage of needy children left them feeling unsatisfied. Out of the desire to deal with hunger in a revolutionary new manner and to affect greater change, Pate, still Unicef's Executive Director, organized a conference at Bellagio in 1964 to stimulate co-ordination of childhood needs with national planning priorities. The ideology that emerged from Bellagio, though in accordance with FAO's Nutrition Division, represented a unique new approach. FAO advocated improved food supplies through national policy-making; Unicef promoted national policies, in economic planning for example, that considered the plight of children. These tactics define many of the nutritional developments of the 1960s. FAO and Unicef together acknowledged that they alone could not arrange for extensive, successful development.

While policy and propaganda attracted the attention of Unicef and FAO, protein continued to monopolize the scientific efforts and dialogue of nutritionists and physicians alike. Calls for continued concentration on protein needs reverberated in the lecture halls of nutritional conferences as speakers proclaimed that "the great hunger of the world is a nitrogen [protein] hunger".¹⁰ Such manifestations of ongoing scientific interests suggest the first delineable parting of ways between policy makers and scientists. While FAO, WHO, and Unicef were increasingly looking toward country-based policy solutions, scientists were intensifying their protein interest. At the World Food Congress attended by the directors of WHO, FAO, and Unicef, Henry Sebrell, then the head of the Institute of Nutrition Sciences at Columbia University and a formidable PAG member, presented a stirring tribute to the greatest nutrient of them all: protein. After remarking on the veritable superiority of protein over carbohydrates and fats, Sebrell proclaimed that it was "no accident that the

⁹Milestones in Unicef's History 1946-1985', January 1986, Unicef Archives, PR-NU-001, p. 3.

¹⁰Hugues Gounelle, 'Major human nutrition problems today', in Proceedings of the Fifth International Congress on Nutrition, Washington, D.C. September 1-7, 1960, *Federation Proceedings*, March 1961, Supplement no. 7, 389-92, on p. 389.

underdeveloped people in the world today are those on poor protein foods."¹¹ Thus, according to him, protein deficiencies were not only responsible for kwashiorkor and stunted physical growth but for underdevelopment itself. If the cause of underdevelopment were a lack of protein, then protein production would be one of the solutions that had to be pursued furiously. It is notable that while much of discussion about solving hunger problems had turned to community and national policy approaches, physicians and nutritionists were filtering such talk through their own interests and consistently arriving at a protein focus. Nevertheless, Sebrell himself noted that WHO, FAO, and Unicef programmes could make progress, albeit on protein only, if they focused on the resources available in individual countries and looked toward broad national programmes.¹² For all the rhetoric about national planning, there were few examples of successful co-operation and no blueprints for pursuing this approach.

The Freedom From Hunger Campaign

The 1960s began with the implementation of the FFHC, the largest project ever undertaken to draw profound international attention to the massive toll of hunger and malnutrition in developing countries. The FFHC was the brainchild of FAO's Director-General, B. R. Sen. Soon after assuming office in 1958, he first sketched the programme which was refined and presented to the Conference late in 1959. The FFHC was built on a platform that acknowledged that progress in developing countries in the fight against poverty had been widely unsuccessful and that acute population pressures threatened to exacerbate the situation.¹³ The multifarious goals of the FFHC included increased agricultural output, increased income, and industrial development.¹⁴ The call for increasing agricultural production revolved around FAO's fears that production was not keeping pace with population growth, a theme which FAO frequently emphasized.¹⁵ The economic focus of the FFHC represented a

¹¹W. Henry Sebrell, Jr., 'The prospect of meeting protein needs', in *Proceedings of the Fifth International Congress on Nutrition*, Washington, D.C. September 1-7, 1960, *Federation Proceedings*, March 1961, Supplement no. 7, 393-97, on p. 393.

¹²*Ibid.*

¹³*Report of the 10th Session of the Conference 31 October - 20 November 1959*, Rome, FAO, 1960, p. 48.

¹⁴*Ibid.*, p. 49.

¹⁵For example see: *Population and Food Supply*, New York, United Nations Office of Public Information, FFHC Basic Study no. 7, 1962 and *Report of the Twelfth Session of the Conference, 16 November-5 December 1963*, Rome, FAO, 1963, p. 22, paragraph 96.

departure from the straightforward application of technology that had coloured so many development programmes during the previous decade. FAO sought to foster economic growth in order to attack hunger and malnutrition though the means for achieving this growth were not elucidated. In summary, the broad goal of the campaign was "to promote a climate of opinion throughout the world in which the problems of hunger and want would be faced realistically, their causes analysed objectively, and appropriate remedies boldly and courageously applied."¹⁶ Aykroyd, for his part, hoped that the FFHC would aid in the application of existing nutritional knowledge.¹⁷ Dr. M. Ezekiel, an FFHC director, believed that the FFHC would only be successful if it increased the total international expenditures on expanded food production and consumption. He further worried that the developing countries conceived of the campaign primarily as an action programme instead of an educational and informational undertaking.¹⁸ To these ends, FAO called for the establishment of national FFHC committees to raise consciousness about hunger and malnutrition. By the end of 1961 there were thirty-three such national committees hard at work fund-raising for FFHC projects, many of which were FAO- and Unicef-managed programmes.¹⁹ The five-year FFHC originally sought to harness the strengths of WHO, FAO, Unicef and all other international and national agencies working on hunger issues and to direct them toward laying sound policies for ending hunger. Sen further believed that nutritional scientists would play a major role in accomplishing these lofty goals.²⁰

In spite of the initial enthusiasm that fuelled an FFHC media blitz, the manner in which the campaign proposed to channel resources into long-term solutions remained elusive. The summary solution for the world food problem chimed by FAO staff at conferences often sounded like ideas that had previously been labelled "unfeasible" or "inappropriate". In *Hunger: Can it be averted?*, Norman Wright, FAO's Deputy Director-General, opined that the only lasting solution to hunger and

¹⁶*Report of the 10th Session of the Conference*, op. cit., note 13 above, pp. 49-50.

¹⁷W. R. Aykroyd, letter to W. H. Pawley, 6 July 1959, FAO Archives, FAO office of ADG, Dr. M. Ezekiel, FFHC files, titles A-E. From the beginning, Aykroyd had feared that FFHC would be viewed as "nothing more than an attempt to boost FAO's long-term program and budget." He therefore suggested that the FFHC expand nutritional endeavours to include projects for attacking protein malnutrition such as protein-rich food promotion campaigns. W. R. Aykroyd, letter to Frank W. Parker, 13 May 1959, FAO Archives, FAO office of ADG, Dr. M. Ezekiel, FFHC files, titles A-E.

¹⁸M. Ezekiel, letter to B. R. Sen, 12 November 1959, FAO office of ADG, Dr. M. Ezekiel, FFHC files, titles A-E.

¹⁹*Report of the Eleventh Session of the Conference 4-24 November 1961*, Rome, FAO, 1962, pp. 18-20.

²⁰Sen, op. cit., note 7 above, p. 386.

malnutrition "is to secure by the widespread application of the recent scientific and technical advances the necessary increase in food production within the less developed countries themselves."²¹ His opinion and the general platform of the FFHC were epitomized in the seminal publication of the FFHC, the *Third World Food Survey*, the second follow-up to the momentous examination of international hunger and malnutrition first conducted under Orr's leadership. The world food surveys suggested that half of the world's population, mainly residing in developing countries, suffered from undernutrition and malnutrition. The third survey, however, was qualitatively improved since it relied on food balance sheet data for more than eighty countries that represented over 95% of the global population.²² Following historical trends it then extrapolated an estimated rate at which food production in developing countries would have to expand in order to keep pace in "the race against population growth" and improve nutritional status.²³ One of the broadest conclusions of the third survey was that high infant mortality rates, low work efficiency, and low resistance to infection all indicated rampant malnutrition which, according to the authors, was "not surprising, since in these areas the level of animal protein intake is only one fifth of that in the more developed areas." (emphasis mine)²⁴ In light of the mounting interest in vegetable protein concentrates, the survey's identification of animal protein as a serious food deficiency in the world was ironic. Perhaps there was a major gap in communication between FAO's nutritionists and its surveyors. In any case, the intimidating conclusion based on projections stated that world food supplies would have to rise by 50% by 1975 in order to promote meaningful change in the nutritional levels of developing countries.

It was against this confusing backdrop of grim statistics and feverish optimism which Sen and the FFHC had roused that Dr. Donald McLaren, a frequent critic of WHO and FAO and a professor at the prestigious nutrition unit at the American University of Beirut, launched what would be his first of many public attacks against

²¹Norman Wright, 'The current food supply and present trends', in E. John Russell and Norman Wright (eds), *Hunger: Can it be averted?*, London, The British Association for the Advancement of Science, 1961, 1-14 on p. 13. The FAO Conference took a more pessimistic view and stated alternatively that "the application of modern science and technology could not solve the problems of hunger and malnutrition throughout the world, unless the people, individually, nationally and as a world community, become completely involved in the undertaking." *Report of the Twelfth Session of the Conference*, op. cit., note 15 above, p. 23, paragraph 103.

²²*Third World Food Survey*, Rome, FAO, FFHC Basic Study no. 11, 1963, p. 7.

²³*Ibid.*, chart 3.

²⁴*Ibid.*, pp. 8-9, on p. 9. More advanced techniques were being developed and implemented to assess the prevalence of malnutrition and undernutrition. See: *Expert Committee On Medical Assessment of Nutritional Status*, Geneva, WHO, WHO Technical Report Series no. 258, 1963.

the hunger-fighting establishment. In a prominent scientific forum, the "Points of View" section of the *Lancet*, McLaren complained that Sen and FAO had mistakenly identified low agricultural productivity as the cause of world hunger. While McLaren acknowledged that better crops in greater quantities were a fine idea and that food scarcity was a cause of hunger for some people, he contended that "the main reason for the illness and deaths of children is not this scarcity. It is ignorance of infant care and infant feeding."²⁵ This commentary was not in direct conflict with the means being promoted by the FFHC; in fact, Sen had popularly advanced the elimination of nutritional ignorance as one of the key avenues to ending hunger. Nevertheless, McLaren was formulating an argument for how programmes should be focused: yes, he would acknowledge, in some cases supplemental feeding and improved food stocks would help, but in general "these measures will do little to prevent nutritional disease in children."²⁶ For McLaren, his recent experiences in Beirut had further illuminated what he perceived to be the causes of hunger. He recounted:

I had a metabolic unit with 10 beds with malnourished marasmic infants from Lebanon...and you could see them there, their histories, and all but one of those were Muslims, Sunni Muslims...and that was reflected in the nutritional state of their children, that was so deep in politics, economics, it wasn't going to be remedied by FAO, WHO, World Bank or anyone else with a quick fix.²⁷

In his article, McLaren concluded that hunger education at the family level and re-education at the level of the community health workers, when presented in a palatable and sensitive manner, were the best hope for solving childhood malnutrition and hunger. His focus on solutions rooted in family education was addressed in passing by the *Third World Food Survey* which had afforded the following relevant comment only a footnote in the text:

It is recognized that food is not equitably distributed in proportion to the needs of individual members, especially in poor households...In generalizing the conclusion regarding the proportion of undernourished households to undernourished populations, it is assumed that these two groups [family members who eat sufficiently and those who do not] broadly counterbalance each other.²⁸

²⁵D. S. McLaren, 'World hunger: some misconceptions', *Lancet*, 13 July 1963, pp. 86-7.

²⁶*Ibid.*, p. 86.

²⁷D. S. McLaren, interview, 6 October 1995.

²⁸*Third World Food Survey*, op. cit., note 22 above, p. 41.

The survey, however, abstained from claiming that improved food supplies would be sure to improve nutritional status and weakly asserted that it only sought to provide a rough idea of the magnitude of improvement required in food supplies in order to allow for improved nutrition.²⁹ Nevertheless, the survey failed to address how this particular problem might be solved simply with increased food production -- the central assumption was that the more food produced in a country, the greater the quantity consumed by every person would be. Issues of transportation networks, distribution channels, and income levels were overlooked.

McLaren's comments were not inherently revolutionary since they advocated a shift that had been occurring for years in the orientation of hunger and malnutrition programmes at the UN agencies. However, McLaren did highlight a philosophy -- nutrition education and ANPs -- that had only minor institutional support.³⁰ At FAO, only a small percentage of funds were being allocated to applied nutrition activities (and many of these were Unicef funds) while the vast majority were funding the other divisions. FAO acknowledged the possible benefits of ANPs but contended that increased food production would be necessary to bolster such efforts:

stringent public health measures and nutrition education may be sufficient to avoid some of the worst consequences of malnutrition [i.e. kwashiorkor, xerophthalmia, and marasmus]. But...a stage is clearly reached when the knowledge, control, and education required to avoid all the consequences of malnutrition are so great that the only practical policy is to raise the general quality of the diet.³¹

Thus, for FAO, quality and quantity of nutrients were the critical issues for the coming years. In Unicef, despite its attentiveness to emerging thought in applied nutrition, only a small percentage of its funds directly benefited such projects. The vast majority continued to fund communicable disease projects and other vertical programmes.³²

²⁹Ibid., p. 58.

³⁰Henceforth, ANP or applied nutrition programme will refer to all comprehensive nutrition activities as well as any application of nutritional knowledge for the improvement of nutritional status. Through the 1950s ANPs were called "expanded nutrition programmes" and during the 1960s were frequently referred to as "nutrition education and related activities." The term "applied nutrition" was not widely used until the mid-1960s. *Report of the Joint FAO/WHO Technical Meeting on Methods of Planning and Evaluation in Applied Nutrition Programs, Rome, 11-16 January 1965*, Rome, FAO, FAO Nutrition Meetings Report Series no. 39, 1966, pp. 1, 7.

³¹*Third World Food Survey*, op. cit., note 22 above, p. 50.

³²Between 1960-1964, Unicef allocated 67% of its total budget (\$89.3 million) to health services and disease control. 'Unicef's Part in the Development Decade, 1960-1964: a note prepared for the 1965

FAO's philosophy was hardly as narrow as some of its comments suggested since, in fact, it did recognize the possible benefit of expanding the FFHC to include hunger, disease, and ignorance in its calculus of activity. However, most delegates in the 1963 FAO Conference preferred that the campaign maintain its original focus on increased food production to keep pace with population growth.³³ A major highlight of the FFHC came in March 1963 when its "World Freedom from Hunger Week" attempted to attract attention world-wide to population growth outstripping agricultural production. FAO reported that events around the world had stirred consciousness of hunger issues. Among the activities were the following: thirty students held a 12-hour fast in London, twenty girls in Malaya recorded the FFHC song for the radio, the U.S. hosted an Ambassadors' Dinner in Washington for one thousand guests, farmers in Ghana commissioned the recording of a somber song about food, and Catholic priests around Latin America devoted their sermons to the week.³⁴ World-famous intellectual and political figures such as Earl Attlee, the former British Prime Minister, Aldous Huxley, John Boyd Orr, and Nobel Laureates C. F. Powell, E. L. Tatum, E. B. Chain, and Salvatore Quasimodo, gathered before the week's festivities to draft a manifesto drawing further attention to hunger.³⁵ Three months later, the World Food Conference continued the momentum built up by the FFHC as 1300 participants from 107 countries descended on Washington to discuss the issue. Given the popularity of the campaign, it seemed only natural for the FFHC in 1964 to be granted approval for continuing its work until 1970. By the time of the FFHC's extension, it had raised \$22 million from individuals and governments for projects world-wide.³⁶

Rallying the Public and Governments

Prior to the 1960s, nutrition advisors and consultants had viewed national nutrition planning as a failure. Their experiences demonstrated that co-ordination of objectives within developing countries at least required issues which leadership considered important: nutrition was not among them. According to Scrimshaw,

Progress Report to ECOSOC on the Development Decade', New York, 30 October 1964, Unicef Archives, CF/HST/1985/034/Anac 03/10, p. 10.

³³*Report of the Twelfth Session of the Conference*, op. cit., note 15 above, p. 23, paragraph 99.

³⁴*Freedom from Hunger Campaign News*, 1963, 4(23), pp. 2-5.

³⁵For details of the week see: *Ibid.*, pp. 8-11.

³⁶*Report of the Fifth Session of the FAO/Unicef Joint Policy Committee*, New York, 31 March-2 April 1965, E/ICEF/510, pp. 37, 38.

there was a big push by 57 to get ministers of health and education to look at the importance of nutrition. FAO was pushing this, and they were successful in getting quite a number of countries to establish inter-ministerial cooperation...in the first meeting the ministers would come, then [at the second meeting] the deputies, then [at the third] the deputies to the deputies and then they just disappeared.³⁷

Undaunted by poor results, Autret at FAO remained an obstinate national nutrition planning enthusiast and in 1959 articulated the ambitions he believed nutritionists should pursue. He wrote:

It is the duty of the nutritionist to make himself heard at the highest government levels and to contact the departments concerned with the establishment and execution of the programs, such as agriculture, public health and education. To this end, he should propose the creation of a body which will enable general discussion to be held on technical and administrative, as well as financial and economic problems, and permit the choice of solutions; in other words, a national committee on food and nutrition, with adequate staff, authority and financial means at its disposal.³⁸

Although it would take some time, Autret's idealistic thoughts eventually came to have a forum among the UN agencies.³⁹ Up until the 1960s, although conferences and agency objectives had elaborated the benefits of regional nutrition planning and partnership with existing ministries of education and health, practical action had rarely involved top-level governmental connections.

In 1963, just prior to the Sixth Congress of Nutrition, a small group of nutritionists and policy makers met at the Rockefeller Villa Serbelloni (Bellagio) to discuss, under the auspices of the Congress of Nutrition, methods for protecting every community's most vulnerable members, pre-school children. The symposium adopted a two-tiered approach that involved governmental planning alongside swift action to treat and prevent malnutrition.⁴⁰ Their proposals were passed along to the Congress,

³⁷Nevin S. Scrimshaw, interview, 26 July 1995.

³⁸*Report of the FAO/WHO Seminar on Problems of Food and Nutrition in Africa South of the Sahara*, Rome, FAO, FAO Nutrition Meetings Report Series no. 25, 1961, p. vii.

³⁹Aykroyd left FAO's Nutrition Division abruptly in the spring of 1960. Autret left his post as head of the Applied Nutrition Branch and took the reins of the division in August. Marcel Autret, interview, 15 April 1996.

⁴⁰For a detailed description of this symposium see: Paul György and Anne Burgess, *Protecting the Pre-school Child*, London, Tavistock Publications Limited, 1965.

which concurred, and whose first recommendation for the treatment of malnutrition in young children was to encourage governments to accept the role of nutrition in the health of pre-school children. The second, third, and fourth recommendations all dealt with the need for national planning to account for the nutritional needs of young children.⁴¹ Given the weak responses to date, FAO and WHO advisors suggested that the agencies help to establish national nutrition councils that would work with all sectors of government to co-ordinate national nutrition plans. These councils would serve as the main liaison for the UN agencies, and in-country development projects would place nutrition farther under the spotlight in national planning.⁴² FAO would incorporate elements of these approaches into its FFHC programme. For the policy makers concerned, however, the establishment of national policies or committees was an intimidating task that demanded a previously unseen level of government support. According to nutrition experts, national nutrition programmes on every level required co-ordination with government ministers. For education and training projects in nutrition, for example, FAO optimistically expected that national leaders in education, health, and agriculture "should know, or should learn, what education in nutrition can contribute to the segment of the national welfare entrusted to them."⁴³ Thus, means for engendering governmental interests in nutrition policies had to be designed. Part of the motivation for the concern in stimulating government involvement was the demographic observance of massive migration to urban centres, a development that would play an increasingly important role in the design of nutritional programmes.⁴⁴

As national planning initiatives began, it became clear that humanitarian interests alone could not rally support and funding for nutritional programmes. In a number of fields, therefore, initiatives were taken to demonstrate how an improvement in nutritional status of people in the developing world could contribute both to the livelihood of the said country and as well as to the industrialized world. The tactic, perhaps unintentionally, sought to respond to three lurking questions thrown into the public forum by critics, politicians, and even some nutritionists. Altruistic motives aside, the key questions were: 1) What does the West have to gain by supporting

⁴¹Recommendations of the Symposium on "How to Reach the Pre-school Child", 1963, New York, Unicef, UN Archives, CF/NYHQ/EXD/LAB, G0012.

⁴²*Joint FAO/WHO Expert Committee On Nutrition, Sixth Report*, Rome, FAO, FAO Nutrition Meetings Report Series no. 32, 1962, pp. 29-33.

⁴³*Education and Training in Nutrition*, Rome, FAO, FFHC Basic Study no. 6, 1962, pp. 42-3.

⁴⁴See: F. T. Sai, 'The impact of urban life on the diets of rural immigrants and its repercussions on the nutritional status of the community', 19 August 1963, Dacca, East Pakistan, WHO, WHO/Occ.Health/30, Working Paper no. 4, WHO Inter-Regional Seminar on the Health Aspect of Industrialization, LSHTM Archives, WHO reports box.

nutritional programmes in the developing world? 2)What do developing countries' governments have to gain by using their limited national resources to buttress nutritional programmes? and 3)Will business have a role to play in such programmes? The answers to these questions came in a variety of forms which frequently included citation of economic growth and opportunity and of the improvement of working efficiency through nutrition.

Hunger as an Economic Issue

While the vast majority of nutrition programmes benefited mothers and children, FAO and other agencies explored alternative routes for reaching other hungry and malnourished family members who played a role in family nutrition levels. Often this desire led to nutritional work for industrial workers, who were usually male. Perhaps the most illuminating example of the increased ties between hunger and economic development can be found in the FFHC's concentration on the role of nutrition in working efficiency. Although it was widely known that mothers and children were the most undernourished members of the family in developing countries, the FFHC was attempting to garner support from an economic analysis of hunger and malnutrition: hungry workers were less productive. This was an idea that had come up for decades in discussions of agricultural productivity and continued to be applied in this vein: agriculturists could not rise far above starvation because they were too hungry to increase productivity.⁴⁵ Additionally, FAO hypothesized that with increased urbanization, particularly in Africa, the health of those who previously had tilled the land would deteriorate further: "the traditional diet which previously was more or less adequate to a tribal way of life requiring little sustained effort, is found to be insufficient for a worker from whom a regular, sometimes strenuous effort is called for".⁴⁶ But such concerns only figured superficially in the calculus of workers' nutrition. Most importantly, FAO asserted, underfed workers were lethargic, likely to be ill or absent, and accident-prone.⁴⁷ The break that this new conceptualization of hunger problems represented was enormous. For the first time, FAO was presenting hunger policy not merely as a humanitarian gesture, but as an opportunity for economic gains. The Food For Peace programme of the U.S. government mirrored

⁴⁵For a Nigerian example of this assertion see: I. S. Dema, *Nutrition in Relation to Agricultural Production*, Rome, FAO, 1965, pp. 108-109.

⁴⁶*Nutrition and Working Efficiency*, Rome, FAO, FFHC Basic Study no. 5, 1962, p. 4.

⁴⁷*Ibid.*, p. 6.

this new thinking, and WHO expressed interest in feeding plans for industrial workers.⁴⁸

The irony of worker efficiency nutrition programmes was that, although they never became a central component of any UN agency's agenda, they perpetuated the highly criticized practice of transferring nutrition lessons learned in developed nations to developing ones. In the FFHC publication cited, photos appeared of workers in canteens in France and of a modern kitchen at an automobile factory in Germany.⁴⁹ Since the broader institutional concerns of FAO and Unicef involved mothers and children, the worker efficiency development reflects how FAO was trying economic avenues to inspire developing and developed countries to actively support nutritional programmes. Even nutrition for children came to have an economic connotation. From its vantage point in 1965, Unicef considered the great achievement of the first four years of the Development Decade to have been the epiphany of the need to tie economic development to the attack against

disease, hunger, ignorance, and poverty...These sharpened insights into the character of national growth have put the work of Unicef into a new perspective. While the generous and human motives for helping children are in no way diminished, it is now widely recognized that helping children to become the citizens and workers of tomorrow is also a basic component of the most hard-headed development planning.⁵⁰

Unicef continued to emphasize the need for development planners -- economists, government ministers, and sociologists -- to take into consideration the plight of children in their plans and to attract attention by highlighting the societal gains achievable by a healthy and well-nourished population. Conceptually, the idea did not hold the aura of rapid and vertical one-shot communicable disease campaigns or school-building programmes. Rather, nutritional plans depicted long-term programmes that required massive inputs of supplies and funding in order to achieve results in the future -- results that were often hard to evaluate. The language of the relationship between hunger and development was popular with policy makers and nutritionists alike. In a presentation at the Sixth International Congress on Nutrition, Pate crystallized the then widely held sentiment that development hinged on ending

⁴⁸R. C. Burgess, letter to M. Autret, 6 November 1961, WHO Archives, box A.0916

⁴⁹*Nutrition and Working Efficiency*, op. cit., note 46 above, pp. 34, 39.

⁵⁰'Unicef's Part in the Development Decade, 1960-1964', op. cit., note 32 above, p. 1.

hunger: "Poorly fed people simply do not have the physical and mental energy they need to solve their own problems."⁵¹ For nutritionists, these statements instilled a new sense of importance. Their mission of solving hunger problems was no longer simply altruistic and appealing for its humanism; their work conferred socio-economic advantages.

While the treatment and prevention of PCM was more frequently couched in economic terms to make the task seem appealing to developing countries (and in the long-term industrialized nations), there was another side to the economic equation which involved enticing food producers to produce protein-rich products for developing countries. Perhaps the best summary and representation of this movement and demonstration of how corporate tropes were entering the substance of hunger policy was contained in a report entitled *The Protein Paradox: Malnutrition, Protein-rich foods, and the Role of Business*, written by several students at Harvard Business School. The purpose of the report, in the words of the students was, in light of the stodgy attitude with which protein products had to date been considered, "to provide management with type of information that will lead to more action." (emphasis theirs)⁵² The report attracted the attention of prominent nutritionists, as shown in the introduction written by Scrimshaw.⁵³ The authors asserted that economic development demanded a range of inputs and that elimination of malnutrition was an integral component of the process.⁵⁴ The report provided an analysis of the enormity of protein problems in developing countries and a diagram for how U.S. businesses could produce high-protein food supplements and thereby aid the needy, make a profit, and open up a new market in the future. Although their investigation showed promise, it did not conclusively establish that this tactic was economically desirable.⁵⁵ Further, it highlighted the rift between nutritionists and food technologists who wanted low-cost high-protein foods marketed and companies that felt such operations could be fiscally unwise.⁵⁶

FAO, WHO, and Unicef had been advocating commercial production of healthy infant foods for years, U.S. food firms were promoting carbohydrate supplements which in many cases had a deleterious effect on infant nutrition in

⁵¹Pate, op. cit., note 6 above.

⁵²G. C. Belden, Jr., W. L. Congleton, W. R. Devoto et al., *The protein paradox: malnutrition, protein-rich foods, and the role of business*, Boston, Management Reports, 1964, pp. 9, 125.

⁵³Ibid., pp. iii-iv.

⁵⁴Ibid., p. 3.

⁵⁵Ibid., p. 125.

⁵⁶Ibid., p. 126.

developing countries. One such product, a corn starch called "Maisena", was then being marketed in Brazil in poor slum areas. Rather than mixing the corn starch with milk, as indicated, these mothers were mixing it only with water, and protein malnutrition was the result. In a letter from Max Milner, Unicef's senior food technologist, to U.S. Senator Hubert Humphrey, then on the Committee on Foreign Relations, Milner expressed his concern about U.S. firms taking advantage of commercial marketing and promotion in developing countries with nutritionally inadequate foods. Milner further told Humphrey that Unicef was working with nutritionists to lobby these firms to market high-protein supplements that would convey a health benefit.⁵⁷ The nutritional landscape was thus sprinkled with concerns about companies that were promoting such dangerous foods, and the political methods for convincing them to do otherwise.

Applied Nutrition Programmes: The Fad that Faltered

Although men and workers received some increased concern from nutrition programmes, such initiatives were dwarfed by applied nutrition. With milk supplement programmes' stagnation in 1959, Unicef finally began to attract attention to the applied nutrition programmes which it had been openly encouraging since 1957.⁵⁸ According to Arthur Robinson, in the Caribbean region it was not until the milk crisis that country governments, ministries of health, and local agencies were willing to look beyond feeding programmes and toward alternative solutions for childhood malnutrition.⁵⁹ To Robinson, applied nutrition essentially consisted of education to overcome ignorance and superstition, and demonstration to show people how to produce foods rich in protein and vitamins. Indeed, applied nutrition projects were a central point of funding during the early-1960s. Out of the twenty-one projects which the Unicef Executive Board approved for nutrition aid in 1961, eighteen were applied nutrition projects, two were for milk conservation, and one involved high-protein weaning foods. When fully funded these projects required nine million dollars -- over

⁵⁷Max Milner, letter to Hubert H. Humphrey, 10 February 1964, Scrimshaw personal collection.

⁵⁸See: Maurice Pate, 'Expansion of UNICEF Aid to Maternal and Child Nutrition Note and Recommendation by Executive Director', 9 July 1957, E/ICEF/I.1123. Nevertheless, dry milk distribution continued, and Unicef provided it for schools and health programmes in 76 countries in 1962. *Children of the Developing Countries*, Cleveland and New York, The World Publishing Company for Unicef, 1963, p. 59. This report provides a reasonably detailed view of Unicef's programmes in nutrition.

⁵⁹Arthur Robinson, 'Practical and Policy Aspects of Unicef Assistance to Programmes for Improved Nutrition', 1961, Unicef Archives, CF-NYHQ-05AT.

twenty-eight percent of Unicef's total budget.⁶⁰ The vast majority of them concentrated on education and training by providing funds for applied nutrition training programmes. In the long-term, all these projects looked forward to opening other applied nutrition centres, raising nutrition levels, increasing food availability, and preventing malnutritional diseases.⁶¹ Generally, the ANPs allowed community health workers and others in related fields opportunities to study nutritional needs and methods for encouraging more varied crop production and consumption of protective foods.⁶² FAO supported these projects though it stressed the need for applied nutrition initiatives to establish a demonstration project and replicate it.⁶³ A typical applied nutrition project involved the following components: a base-line nutritional survey, education and training of field staff, nutrition education of the population, projects for production of high-protein foods through school, community and home gardens. Unicef usually provided gardening supplies, funds for poultry raising and fisheries, transportation, manuals, and training stipends.⁶⁴ Reports of successful projects along these lines were rarely heard.

Applied nutrition rapidly came to refer more to training and education than to the actual realization of sample development projects such as home gardens. Platt, along with two other consultants in 1962, independently assessed the integrity of the WHO, FAO, and Unicef programmes in nutrition training and education. Their perceptive analysis crystallized for some the perpetual problems in fighting hunger. While the consultants cited ignorance and poverty as the principal causes of undernutrition and malnutrition, they explained that the problem of ignorance could not be confined to hungry people alone. Rather, it was the politicians and people with power who were ignorant of nutritional concerns and were also culpable.⁶⁵ Thus they believed that while on a village level ignorance had to be combated through nutritional demonstration projects -- applied nutrition, fish farming techniques and similar projects

⁶⁰*Report of the Executive Board 280th to 293rd meetings 4 June 1962*, New York, Unicef, E/ICEF/454, 1962, pp. 30-31

⁶¹ANPs were frequently jointly funded by Unicef and the local or national government. WHO and FAO at times paid for required personnel. In Vietnam, for example, Unicef provided \$23,000 for an ANP while WHO provided a nutrition educator and a fellowship, and the Government of Vietnam offered \$73,000 for the first two years of operation. 'Plan of operation for an applied nutrition project in Viet-Nam', December 1964, WHO Archives, box A.0909.

⁶²*Report of the Executive Board 280th to 293rd meetings*, op. cit., note 60 above, pp. 30-31.

⁶³*Ibid.*, p. 31.

⁶⁴'Unicef's Part in the Development Decade, 1960-1964', op. cit., note 32 above, p. 27.

⁶⁵B. S. Platt, A. Angladette, and L. A. Maynard, *Report of a Joint WHO/FAO/UNICEF Survey of Education and Training in Nutrition*, New York, Unicef, August 1962, p. 14.

-- on a national level, nutritionists had to inform public leaders of the gross inadequacies in the national diet. Platt and his colleagues attributed the failure of many well-intentioned national programmes to this public ignorance: "Examples of efforts rendered futile because they have been made without full and continuous government support are depressingly numerous and familiar."⁶⁶ Platt's belief that ignorance ought to be identified as much with leaders as with hungry people was hardly infectious. To many, ignorance remained the root cause of malnutrition and hunger.

An FAO publication in 1962 mocked contemporary comments such as "the diet of a rural population is determined by the foods grown in the area, [and]...improved diets can result only from increased income" because they failed to proclaim ignorance the cause of nutritional problems.⁶⁷ In response to those who placed socio-economic status higher on the ladder of causality than ignorance, the author added to the already rich literature of tales of ignorance from the field: "in Bantu homes, girls and women of child-bearing age are usually forbidden to drink milk and may not be marriageable if they do, because milk is believed to cause sterility in females...in Indonesia...some children suffering from protein deficiency are forbidden to eat dried fish" due to fear of worms.⁶⁸ The tales continued and aimed to justify the need for nutrition education. Notably, when countries were cited that had utilized nutrition education to raise nutritional status, the examples given were invariably in industrialized countries -- successes in developing countries were sparse. The consequence of such appraisals of malnutrition often were recommendations that entirely subverted facts demonstrated by Orr decades earlier in England. Whereas Orr had shown that poor people, often regardless of their level of nutritional knowledge, were not as well-nourished as wealthier people, information packets and related propaganda, particularly from FAO, insisted that malnutrition was usually just the result of poor food choices.⁶⁹

Unicef and FAO administrators alike allocated substantial funding to the printing of nutritional literature. In 1962 correspondence by Les Teply, the Unicef chief of applied nutrition, he stated that he had "long felt that one of the best ways of putting Unicef dollars to work for better nutrition of children and mothers is to assist

⁶⁶Ibid., p. 11.

⁶⁷*Education and Training in Nutrition*, Rome, FAO, 1962, FFHC Basic Study no. 6, p. 7.

⁶⁸Ibid.

⁶⁹For a representative illustration, see John Fridthjof, *Encouraging the Use of Protein-Rich Foods*, Rome, FAO, 1962.

in production and large scale distribution of appropriate literature."⁷⁰ While Teply recognized that poor women were usually illiterate, he argued that most of them had children and husbands who could read. In Teply's mind, the major obstacles to greater organizational support for nutritional literature were the difficulties in producing them locally and FAO's time-consuming insistence that it approve every word at headquarters.⁷¹ Supply of textbooks and manuals in addition to well-trained personnel were the primary impediments to effective applied nutrition programmes. WHO and FAO saw their role in the matter as developers of nutritional information, publishers, and trainers of nutritionists.⁷² The 1961 Joint FAO/WHO Expert Committee on Nutrition identified the dearth of trained nutrition workers as "the limiting factor in many of the activities carried out by these two international organizations."⁷³ Given FAO's continuing financial instability, the committee's words were certainly an exaggeration. However, the committee did provide fuel for the numerous FAO conferences which were a good deal simpler to organize than community-level applied nutrition. At a conference, success was usually gauged by the number of participants. The agencies promoted regional training projects for a couple hundred health workers every year. Unicef also took part and boosted its allocations to training from 10% of total allocations in 1960 to 33% in 1963 and 1964.⁷⁴

By October 1963, WHO, FAO, and Unicef had among them fifty-eight applied nutrition projects operating in forty countries.⁷⁵ In most regions ANPs were still being approached cautiously and were viewed as "new", although they had been implemented for six years.⁷⁶ A confidential evaluation of these projects by anonymous consultants sharply criticized their failure to work with local and national government plans and to establish baseline information about local nutrition levels in order to evaluate progress. Moreover, evaluators asserted that due to a lack of country

⁷⁰Les Teply, letter to S. M. Keeny, New York, 5 September 1962, Unicef Archives, 88R025, Box T-006, Teply files.

⁷¹Ibid.

⁷²For an example of a typical textbook published by FAO, Unicef, and WHO see: Michael C. Latham, *Human Nutrition in Tropical Africa*, Rome, FAO, FAO Food and Nutrition Series no. 11, 1965.

⁷³*Joint FAO/WHO Expert Committee On Nutrition, Sixth Report*, op. cit., note 42 above, p. 48.

⁷⁴'Unicef's Part in the Development Decade, 1960-1964', op. cit., note 32 above, p. 11.

⁷⁵'Applied Nutrition Programmes FAO, WHO, Unicef', Draft paper for the meeting of WHO Country Representatives, October 1963, LSHTM Archives, WHO reports box, p. 2.

⁷⁶'Nutritional needs and problems of children in Asia', 19 November 1963, New York, E/ICEF/475, p. 8.

infrastructure, the projects had had "doubtful" impact on childhood malnutrition⁷⁷ and were apt to fail as soon as experts left the area.⁷⁸ The establishment of school gardens for teaching better nutrition at schools had had "irregular" results.⁷⁹ Due to this scathing evaluation, ongoing projects were pronounced irretrievably flawed and "WHO realized that due to a series of circumstances...the activities in the Applied Nutrition Programmes directed towards prevention of malnutrition in young children are not sufficiently developed to produce any significant impact in the reduction of the [sic] prevalence of this condition."⁸⁰ The WHO negative viewpoint aside, ANPs continued to dominate nutrition planning discussions for years to come.

With the advent of national planning approaches in the mid-1960s, applied nutrition strategies were modified to include joint planning with governments and different ministries, rather than merely with, for example, ministries of agriculture. Moreover, FAO and Unicef sought to target, as accurately as they could, mothers and children as the most important beneficiaries of ANPs. While neither organization wished to exclude other family members, they did wish to formulate projects strictly directed at the needs of mothers and children. Since FAO and Unicef were the primary sponsors of ANPs and frequently found their responsibilities overlapping, they decided that FAO would be responsible primarily for promoting national and international projects to raise overall nutritional status while Unicef would focus specifically on childhood nutritional conditions and their improvement.⁸¹ Ironically, Unicef was increasingly interested at the same time in national policy-making, thus these types of general policy boundaries -- which are drawn directly from FAO and Unicef meetings -- cannot be taken at face value. For historical accuracy, it is important to note that while rhetorically these agencies attempted to distinguish their work, there was mutual encroachment on individual agency responsibilities. ANPs will continue to be discussed since they continued to be the programmatic philosophy on which many nutritional initiatives were pivoted. However, in Scrimshaw's view, applied nutrition reached its heyday in the early-1960s and would later be considered a noble, failed effort.⁸² His viewpoint is significant since, as we have seen, ANPs seemed only to be in a growth phase during this time period.

⁷⁷'Applied Nutrition Programmes FAO, WHO, Unicef', op. cit., note 75 above, p. 5.

⁷⁸Ibid., pp. 3-4.

⁷⁹Ibid., p. 8.

⁸⁰Ibid., p. 12.

⁸¹'Report of the Fifth Session of the FAO/Unicef Joint Policy Committee', op. cit., note 36 above, paragraphs 13-50.

⁸²Nevin S. Scrimshaw, interview, 25 July 1995.

Unicef's Country Approach

Early in 1961, Pate's progress report to the Board of Unicef highlighted a shift in Unicef's emphasis from communicable disease cure and treatment toward hunger and malnutrition: "Underfeeding and malnutrition play a considerable part in the pathology of childhood. Their importance was rather underrated in the past, but is now recognized throughout the world."⁸³ Although his words did not report a new concentration for Unicef -- after all, Unicef had focused for over a decade on feeding, ostensibly for prevention of undernutrition and malnutrition -- they did set a fresh tone. He continued, "A strong current of opinion, brought about partly by international organizations, and in particular by FAO through its Freedom from Hunger Campaign, has revealed that the solution of the food and nutrition problems is an essential condition for the very future of many countries, and perhaps of all mankind."⁸⁴ Thus, Pate had very smoothly returned to the doomsday rhetoric of Orr, who had frequently spoken of the need for all people, especially children, to be well fed. Unlike Orr, and unlike the Pate of a decade earlier, he emphasized Unicef's shift away from feeding programmes and toward long-term nutritional interventions. In particular, he highlighted nutrition education, applied nutrition, local milk production projects, and the application of PAG studies on the use of high-protein mixtures.⁸⁵ Soon after, Pate further elaborated abstractly on the direction in which he wished to direct Unicef and remarked that improvement in agricultural production of protective foods in developing countries would have to be a priority, especially in light of population growth. He felt that this measure along with "economic development" coupled to "social progress" would assure true advancement.⁸⁶ His comments reflect the difficulty his agency and FAO were having in expressing the need for concerted development that was not simply grounded in stop-gap measures to which nations had grown accustomed. Both FAO and WHO had already been encouraged to adopt and "integrated approach" to maternal childhood nutrition programmes though it was Unicef that began to identify the ingredients for this approach.⁸⁷ While all of this

⁸³Maurice Pate, 'General progress report of the Executive Director', 11 April 1961, E/ICEF/409/Add.1, paragraphs 40-41.

⁸⁴Ibid., paragraphs 43-44.

⁸⁵Ibid., paragraphs 40-45.

⁸⁶Maurice Pate, 'Statement by Executive Director to Executive Board', 7 June 1961, E/ICEF/430, p. 4.

⁸⁷*Joint FAO/WHO Expert Committee On Nutrition, Sixth Report*, op. cit., note 42 above, p. 65.

discussion was occurring within the UN agency network, some unpublicized findings were suggesting that development would have to go far beyond simple nutrition education and subtle family planning in order to make progress for children. An article by South African medical officers commented in 1963 that while some forward-looking policy makers were encouraging family planning to avert childhood malnutrition, such tactics were in vain without contemporaneous improvements in parental education levels and standards of living.⁸⁸ These intimidating conclusions underline the dilemma that Unicef and other agencies were still trying to elucidate: how do we improve childhood nutrition?

Pate and his advisers were struggling with how to bind nutrition for children to socio-economic development in the context of the "UN Decade of Development". How would better nutrition provide for industrial advancement and increased wealth? Pate was not sure, he could only assert that "Investment in children is recognized in the abstract as being more valuable than investment in equipment, but it tends to be neglected in practice because the dividends do not show up so clearly in the national accounts."⁸⁹ Business-minded Pate had stumbled on to one of the elusive ways in which countries could be convinced to invest in their children: if only it could be shown that improved nutrition **would** result in greater economic success, then the UN agencies would be able to "sell" nutrition more easily. As the nature of Unicef programming was rapidly changing, Unicef had to find a way to encourage its newer nutrition programmes, such as ANPs, in developing countries. The food supplementation and school feeding programmes that Unicef had tirelessly pursued for over a decade were in great part subsumed by the newly founded World Food Programme (WFP) in 1961 as well as by other aid agencies.⁹⁰ The UN and FAO jointly sponsored the WFP which sought to promote social and economic development through utilization of surplus food and also to treat malnutrition.⁹¹ In its first year of operation, WFP's sixteen million dollars in cash contributions were roughly equivalent

⁸⁸Isobel Robertson, Margretha Kemp, 'Child health and family size: a survey relating to the Cape coloured population of Cape Town in the year 1961-1962, *South African Medical Journal*, 31 August 1963, pp. 888-93.

⁸⁹Pate, op. cit., note 86 above, p. 4.

⁹⁰See: *Food Aid and Education*, Rome, FAO, World Food Program Studies no. 6, 1965.

⁹¹Ralph W. Phillips, *FAO: its origins, formation and evolution 1945-1981*, Rome, FAO, 1981, pp. 72-73. See also: 'Review of the Organization's Programme in Nutrition, 1948-1964: Report by the Director-General', Geneva, WHO, provisional agenda item 2.9 for thirty-fifth session of the Executive Board, EB35/9, 27 November 1964, p. 50. The revision of this document was published as: 'Nutrition: a review of the WHO programme-1', *WHO Chronicle*, 1965, 26(4), pp. 160-79; and 'Nutrition: a review of the WHO programme-2', *WHO Chronicle*, 1965, 26(5), pp. 195-207.

to half of Unicef's entire budget.⁹² The programme had three main categories of allocation -- emergencies, feeding programmes, and projects -- of which the latter was the priority.⁹³ Although the WFP was extraordinarily popular with the U.S. government and FAO, its work frequently had troubling effects. In an appraisal for FAO of multi-lateral food aid programmes, one consultant commented that "the use of food aid to provide part of the finance for development plans has so far been the source of the most flagrant examples of harmful effects on development."⁹⁴

As Unicef relieved itself of food-aid responsibilities, the perceived need in the agency to improve the quality and diversity of its projects grew. In June 1961 the Unicef Executive Board adopted recommendations stemming from the "Survey on the Needs of Children". The preliminary data of the survey had drawn "a vast and terrible picture" of childhood health status in developing countries.⁹⁵ Their survey led to a radical shift away from the individual project approach, often vertical in nature, that had characterized previous nutrition and health policies, and toward a multi-sectoral horizontal strategy embodied in the "country approach".⁹⁶ For years desk officers in many countries had been criticizing Unicef's implementation of projects from headquarters. They had consistently found that headquarters did not have the insight into the country situation necessary to identify and support the most effective measures. Moreover, each project had to receive FAO or WHO technical approval, slowing its field implementation often by several months. By decentralizing decision-making, Unicef provided local staff with the autonomy to decide, in partnership with national governments, which projects would be of the most help to children.⁹⁷ The Board agreed to consider funding projects in any field that would demonstrably help children.⁹⁸ This was a major departure from past policy and hypothetically allowed

⁹²A. H. Boerma, *Report on the World Food Program by the Executive Director*, Rome, FAO, 1965, paragraphs 15-16.

⁹³*Ibid.*, paragraphs 208-220.

⁹⁴Jan Dessau, *The Role of Multilateral Food Aid Programs*, Rome, FAO, World Food Program Studies no. 5, 1965, p. 21.

⁹⁵Pate, *op. cit.*, note 86 above, p. 4.

⁹⁶John Charnow, personal correspondence, 19 January 1996.

⁹⁷'Milestones in Unicef's History 1946-1985', *op. cit.*, note 9 above, p. 3. Heyward believed that the "impulse" for working with countries in this manner had come from Dr. Sicault, a regional director and the Deputy Director of Planning at Unicef during the early-1960s. E. J. R. Heyward, interview conducted by Margaret Catley-Carlson, 14 July 1983, Unicef Archives, interview file, p. 9.

⁹⁸E. J. R. Heyward, 'Notes on history of Unicef "policy"', New York, 17 March 1965, Unicef Archives, CF/HST/1985/034/Anac 03/11, pp. 16, 17. Note that Heyward placed the term policy in quotations in the previous title. Although a historical analysis clearly indicates that there was policy, Heyward still questions whether such a thing existed.

each Unicef country programme to be tailored to the individual needs of children in the country. The first major change to emerge from the Board's decision was a plethora of primary education programmes in Africa which had previously been outside Unicef's scope of work.⁹⁹ Nevertheless, certain developmental priorities were still necessarily central to the approach taken by desk officers in all developing countries. Specifically, ANPs, treatment for moderate and severe malnutrition, supplementary feeding, and prevention and treatment of infection remained part and parcel of each country protocol.¹⁰⁰ Just how programmes were implemented was increasingly left to the field staff's discretion. Although the country approach held much promise for more effective country programming in the future, by 1965 its results were mixed. Heyward found that some country officers were able to utilize the country approach very effectively while others did not find the concept sufficiently well-defined and lamented the increased emphasis on planning and decrease in tangible supply aid.¹⁰¹

PAG Power

By the beginning of the 1960s, the PAG had become more influential than ever, and Aykroyd commented that while the PAG's branch, The Committee on Protein Malnutrition, was not a UN body, "it has been so closely associated with the UN agencies and the UN program that it has often been hard to tell the difference."¹⁰² Since the PAG's popularity in large part stemmed from its focus on protein, protein was to remain at the centre of its policy recommendations and research. In 1960 the PAG stated that it was interested in protein and other aspects of malnutrition but it was always clear that caloric intake was never to play a significant role, a notion that irked many nutritionists.¹⁰³ This stand appeared to contradict recent clues to the actual prevalence of protein malnutrition in developing countries. A WHO supported study of protein malnutrition prevalence in the early-1960s in Southern India found that while incidence of kwashiorkor was found in one percent of children, marasmus

⁹⁹E. J. R. Heyward, interview, 5 May 1995.

¹⁰⁰See: 'Health components in nutrition programmes', June 1965, E/ICEF/528, paragraph 154.

¹⁰¹Heyward, op. cit., note 98 above, p. 17.

¹⁰²W. R. Aykroyd, 'The FAO Committee on Protein Requirements', in *Progress in Meeting Protein Needs of Infants and Preschool Children, Proceedings of an International Conference held in Washington, D.C., 21-24 August 1960*, Washington, D.C., National Academy of Sciences and National Research Council, Publication 843, 1961, 545-48, on p. 545.

¹⁰³William J. Darby, 'History of PAG', in A. Sachs and P. Cormier (eds), *The PAG Compendium: The Collected Papers Issued by the Protein-Calorie Advisory Group of the United Nations System, 1956-1973*, New York, Worldmark Press, Ltd., 1975, p. xxv.

was found in twice as many.¹⁰⁴ The Sixth Joint FAO/WHO Expert Committee on Nutrition expressed tepid concern that perhaps the protein focus was excessive: "Kwashiorkor has tended to engage the exclusive attention of many workers. The attention of these investigators and of those responsible for preventive and corrective programmes should be directed, without decreasing the interest in kwashiorkor, to all aspects of the problem of protein-calorie-deficiency disease."¹⁰⁵ Through the decade, PAG staff focused their efforts on very specific protein problems, such as the threat of aflatoxin poisoning in ground peanut protein mixtures. This type of intensely scientific work -- most of which related to protein-rich weaning foods -- characterized PAG activities.¹⁰⁶

Although the PAG worked tirelessly on weaning foods, its recommendations were rarely adopted by Unicef and other agencies. From an early point in the development of protein-rich weaning foods, Incaparina, the cotton flour high-protein weaning food developed by INCAP, had emerged the most successful contender, and its availability in markets in Central America improved during the early-1960s. Although Incaparina had a solid scientific base and support from UN agencies, its inventors themselves wondered whether it would have a significant impact on the incidence of protein-malnutrition in young children.¹⁰⁷ While INCAP had determined that it effectively nourished children, the task of inspiring mothers to purchase it and use it consistently -- the mixture's application -- was the central difficulty, just as the application of western technologies to nutritional programmes had been the troubling point for projects during the previous decade. Even Scrimshaw, who previously had harped on kwashiorkor, began subtly shifting emphasis in his prolific publications toward marasmic-kwashiorkor and the prominent role of infection in the deaths of malnourished and hungry children. Béhar, Scrimshaw, and INCAP staff during the

¹⁰⁴Joint FAO/WHO Expert Committee On Nutrition, *Sixth Report*, op. cit., note 42 above, p. 13.

¹⁰⁵Ibid., p. 24. Although these expert reports were important, their presentation was frequently inadequate. After examining a draft of this report, Dr. Jean Mayer, a committee participant, commented to R. C. Burgess at WHO: "having been one of the original drafters of this somewhat cumbersome document, I hope that I can be permitted to say that the style still shows the literary characteristics one achieves in a hotel room at midnight." Jean Mayer, letter to R. C. Burgess, 17 October 1961, FAO Archives, Nutrition Division registry files, box 12, NU 1/2, NU 1/4.

¹⁰⁶See: P. Gyorgy, 'Suitability of Available Protein-Rich Foods for Infants and Pre-School Children', 1962, pp. E499-502 and 'Introduction of Protein-Rich Foods', 1961, pp. E435-36, in A. Sachs and P. Cormier (eds), *The PAG Compendium: The Collected Papers Issued by the Protein-Calorie Advisory Group of the United Nations System, 1956-1973*, New York, Worldmark Press, Ltd., E, 1975. The Compendium itself contains all of the PAG's publications and well reflects its central themes.

¹⁰⁷For the classic paper on Incaparina's clinical success, see: Nevin S. Scrimshaw, Moisés Béhar et al., 'All-vegetable protein mixtures for human feeding: V. clinical trials with INCAP mixtures 8 and 9 and with corn and beans', *American Journal of Clinical Nutrition*, 1961, 9(2), pp. 196-205.

course of a mortality study in four rural Guatemalan villages found that kwashiorkor was responsible for two-fifths of the childhood deaths between the ages of one and four while diarrhoea and infection accounted for the remainder.¹⁰⁸ Such findings reinforced the call by Platt and others for horizontal nutritional policies that targeted several aspects of childhood health -- from clean water and sanitation to protein weaning foods. Behind the scenes, the PAG was having a notable impact on the calculus of nutritional thought among policy makers. When one thought of nutrition problems, protein-malnutrition was most often identified as the problem. Unicef maintained very close ties to the PAG secretariat, especially since Unicef field staff had been aiding a number of weaning food programmes around the world, some in co-operation with WFP.¹⁰⁹

The Sixth Joint FAO/WHO Expert Committee had designated kwashiorkor and marasmus and intermediate stages of disease as "protein-calorie deficiency diseases" (emphasis mine).¹¹⁰ The shift back toward marasmus was echoed by FAO in 1964 when they transferred their emphasis from high-protein weaning foods to supplementary food "with an appropriate protein-calorie ratio".¹¹¹ On an ideological level, the battleground had two encampments: protein and calories. According to Sebrell, the problem of past aid had been its necessary caloric emphasis: "Man has always tended to base his food production on his need for calories and his desire for money...It is essential that caloric needs receive first consideration because the gnawing hunger and emaciation produced by insufficient calories quickly leads to desperation and early death."¹¹² Further, Sebrell stressed that the increase in production of staple foods would not stave off starvation unless they integrated crops of higher protein value.¹¹³ He stated: "Today in the nutrition research laboratories of the world many scientists are seeking ways to extend this ancient practice [of high-

¹⁰⁸For the most concise description of protein malnutrition as it was seen in the early-1960s see: Nevin S. Scrimshaw and Moisés Béhar, 'Protein malnutrition in young children', *Science*, 1961, 133(3470), 2039-2047, on p. 2039.

¹⁰⁹Projects for the preparation and promotion of foods for weaning and pre-school feeding', in A. Sachs and P. Cormier (eds), *The PAG Compendium: The Collected Papers Issued by the Protein-Calorie Advisory Group of the United Nations System, 1956-1973*, New York, Worldmark Press, Ltd., E, 1975, pp. E 679-85.

¹¹⁰*Joint FAO/WHO Expert Committee On Nutrition, Sixth Report*, op. cit., note 42 above, p. 23.

¹¹¹'Review of the Organization's programme in nutrition, 1948-1964: report by the Director-General', op. cit., note 91 above, p. 25. The new term "protein-calorie deficiency disease" was the latest terminology adopted by WHO.

¹¹²Sebrell, op. cit., note 11 above, p. 393.

¹¹³*Ibid.*, p. 394.

protein mixtures] to new mixtures of available foods that are now little used."¹¹⁴ Sebrell's ideology influenced FAO and Unicef policy markedly. In 1965, the Joint FAO/Unicef Policy Committee optimistically stated, "The conviction of the pioneers in the protein-rich foods programme, who believed edible low-cost protein concentrates could be made in developing countries from oilseeds and fish, is gradually being vindicated."¹¹⁵

The growing influence of the PAG could be seen at major nutritional meetings. During Pate's statement at the International Congress on Nutrition in 1963, he implied that calorie malnutrition was a minor problem in the network of health disorders afflicting children in developing countries while protein, vitamins, and minerals were the primary issue.¹¹⁶ One year later, during a presentation before the PAG in New York, he praised the PAG for its persuasion in bringing several major UN conferences and committees during the previous year to acknowledge the supreme importance of protein malnutrition in the world. Pate concluded that statements made by other bodies about protein's significance indicated "the climate of increasing approval and encouragement that there is for international effort in assisting countries suffering from under-nourishment in pioneering projects to produce more proteins for human consumption."¹¹⁷

The PAG emphasis on protein which initially had aimed at aiding weanlings -- that is, children for whom breastfeeding was being phased out -- reflected the growth of interest in pre-school children during the 1960s. Moreover, the PAG also adopted the new language of the economics of malnutrition and incorporated it into its undertakings. Thus, an agency which had begun as a group of scientific elite to advise other agencies increasingly expanded the importance of its concern to build momentum for its cause and to play a greater role in policy-making. At the end of 1964, the PAG Committees on Protein Malnutrition and on Child Nutrition organized their own conference on pre-school child malnutrition, following similar symposia arranged by Unicef, FAO, and WHO. While noting the role of caloric deficiency in pre-school malnutrition, the conference, rather predictably, concentrated its discussion on protein-malnutrition in these children. While it had been well-established that protein-malnutrition in this age group was a major cause of death, this conference

¹¹⁴Ibid., p. 395.

¹¹⁵'Report of the Fifth Session of the FAO/Unicef Joint Policy Committee', op. cit., note 36 above, paragraph 54.

¹¹⁶Pate, op. cit., note 6 above.

¹¹⁷Maurice Pate, 'Statement by Mr. Pate at the P.A.G. Meeting on Monday, 20 July 1964', 1964, New York, Unicef Archives, CF-NYH-09R.H1/C/02.09, 88R025, T-002, 1-2, on p. 2.

strongly commented on how "the maimed survivors [of malnutrition] become adults lacking the vigor and **enterprise** essential for **productive** advancement. Their shortened life span and decreased ability to produce gravely impede the physical, mental and **economic** growth of the population." (emphasis mine)¹¹⁸ Here again we see the influence of an economic perspective on hunger and malnutrition. The PAG and its related bodies became increasingly concerned with the results of PCM on mental development and other areas sure to capture the attention of fellow scientists and health workers.¹¹⁹ Not only was hunger and malnutrition "wrong" due to the pain and suffering inflicted on the innocent, but the effects were far-reaching enough to affect "us". Stunted mental development in people in developing countries assured meagre economic growth and delayed the day when their marketplaces would contain abundant consumers for products from industrialized countries. Just as the other agencies had done, the PAG also bleakly commented that in most developing regions, particularly in Africa, the problem of hunger and malnutrition had scarcely been touched.¹²⁰

The PAG continued its call for massive distribution of PCM protective foods and training and retraining of community health workers.¹²¹ Considering most major nutritionists agreed that supplemental food was merely a band-aid measure in the fight against hunger, it is surprising that the principal theme in FAO, WHO, and PAG circles called for them. In part, the new impetus for distributing surplus foods was borne from U.S. production surpluses. As a result, the agencies redefined the intended results of food aid: "Surplus food should...be used primarily for producing more food (and other goods) and only secondarily to feed the hungry."¹²² Unicef agreed in principle with this approach though, while supporting protein efforts, it believed that its horizontal approach would in the long-run be more effective. Moreover, other agencies such as WFP and Food For Peace had moved in to take over distribution of milk and high-protein food supplements. Some Unicef administrators saw the extent

¹¹⁸'Pre-school child malnutrition: primary deterrent to human progress', PAG document R.10/Add.77, July 1965, in A. Sachs and P. Cormier (eds), *The PAG Compendium: The Collected Papers Issued by the Protein-Calorie Advisory Group of the United Nations System, 1956-1973*, New York, Worldmark Press, Ltd., E, 1975, E41-49, on p. E41.

¹¹⁹*Ibid.*, p. E43.

¹²⁰*Ibid.*, p. E44.

¹²¹*Ibid.*, p. E49.

¹²²S. Chakravarty and P. N. Rosenstein-Rodan, *The Linking of Food Aid with Other Aid*, Rome, FAO, World Food Program Studies no. 3, 1965, p. 1.

of its role in high-protein foods as development and demonstration, not distribution.¹²³ Ironically, the agency that had started off as working solely on emergencies had emerged in nutrition as one planning and implementing long-term approaches.

The PAG's influence aided in the formation of a joint FAO/WHO expert group to re-examine protein requirements. In spite of the abundance of studies on protein and protein requirements, recommended protein intake levels for young children remained a divisive subject. From a national and global perspective, one could not really know how much more protein should be produced in order to meet (hypothetically) every person's protein requirements.¹²⁴ While protein-malnutrition in young children continued to be portrayed as the major nutritional disorder in developing countries, accurate figures of prevalence were a glaring omission from the heady protein research. In 1964, WHO lamented that it had no good data on actual prevalence and that the data it did have only reflected prevalence in hospital or clinic settings.¹²⁵ These shortcomings and the evermore complex framework for developing and implementing protein-rich food supplementation programmes weighed heavily on the PAG leadership.

WHO: In Hot Pursuit of Infection

Soon after the publication of 'Interactions of Nutrition and Infection', WHO buzzed with ideas about pursuing this relationship. In 1961, R. C. Burgess, the head of the WHO Nutrition Unit, in a speech titled 'Protein Malnutrition for the WHO Viewpoint', totally overlooked protein-malnutrition and instead remarked that the association between diarrhoea and malnutrition might be the most important area for WHO scientific investigation.¹²⁶ Ostensibly, to Burgess the central questions about protein-malnutrition had been answered -- weanlings were the most vulnerable and protein weaning foods were needed -- while other medical issues had been overlooked.

¹²³Cyril Hunnikin, 'Memorandum for the record: improved nutrition for the pre-school child', Bangkok, 18 November 1965, Unicef Archives, CF-NYHQ-05ANS-001.

¹²⁴*Protein Requirements: Report of a Joint FAO/WHO Expert Group*, Geneva, WHO, WHO Technical Report Series no. 301, 1965.

¹²⁵'Review of the Organization's programme in nutrition, 1948-1964: report by the Director-General', op. cit., note 91 above, p. 20.

¹²⁶R. C. Burgess, 'Protein malnutrition from the WHO viewpoint', in *Progress in Meeting Protein Needs of Infants and Preschool Children, Proceedings of an International Conference held in Washington, D.C., 21-24 August 1960*, Washington, D.C., National Academy of Sciences and National Research Council, Publication 843, 1961, pp. 533-35. R. C. Burgess and H. J. L. Burgess, both mentioned in this dissertation, are cousins. In order to avoid confusion, I will use their initials or full names.

In a full evaluation of its nutritional work, from 1948 to 1964, WHO reflected on a number of issues that continued to trouble its nutrition programmes. Firstly, the staff felt that international surveys of malnutrition had inadequately mapped out the problem and serious lacunae in knowledge of prevalence remained. Secondly, the interactions of nutrition and infection continued to raise new questions, and the personnel seemed less eager than ever to acknowledge even conventional wisdom. The report weakly stated that "it is **almost** certain that malnutrition reduces children's resistance to infection" (emphasis mine)¹²⁷ and further did not address the issue raised five years earlier by Gordon, Scrimshaw, and Taylor about the influence of infection on malnutrition.¹²⁸ The reserved scientific language describing this work sounded much like the jargon during previous decades. In contrast, however, WHO noted that its latest assistance to member countries, usually in the identification of major nutritional deficiencies, had resulted in ministries of health establishing nutrition sections, the creation of national nutrition "teams", laboratories, and additional training. This type of co-operation depicted the shift in nutritional philosophy toward a decentralized national approach rather than a universal paternalistic one.

WHO, which for so long had been seen as a disease eradicator and as an expeditious, efficient, technological machine, noted that the results from its new nutrition programmes would be "slow to appear in contrast to the results obtained in the control of some of the communicable diseases."¹²⁹ Furthermore, the Director-General stated that newer programmes would emphasize "gradual control and prevention of malnutrition" rather than speedy treatments.¹³⁰ The problem WHO faced in this venture was to convince governments of the need for nutrition planning and develop the necessary resources for programme implementation. Acutely, WHO was feeling the backlash of its own obsession with vertical solutions which had been avidly adopted in developing countries. In contrast to the yaws, malaria, and smallpox campaigns which had all been prefabricated for implementation, nutrition planning

¹²⁷Review of the Organization's programme in nutrition, 1948-1964: report by the Director-General', op. cit., note 91 above, p. 5.

¹²⁸Nevin S. Scrimshaw, Carl E. Taylor, and John E. Gordon, 'Interactions of Nutrition and Infection', *The American Journal of the Medical Sciences*, March 1959, 237(3), 367-403. Not surprisingly, many of the studies which immediately succeeded this work concentrated on the interactions between infection and kwashiorkor. See: Nevin S. Scrimshaw, Dorothy Wilson, and Ricardo Bressani, 'Infection and kwashiorkor', *The Journal of Tropical Pediatrics and African Child Health*, September 1960, 6(2), 37-43.

¹²⁹Review of the Organization's programme in nutrition, 1948-1964: report by the Director-General', op. cit., note 91 above, p. 9

¹³⁰*Ibid.*

demanding country- and regionally-specific programming that would produce only long-term results. WHO grappled to find tangible accounts of its success in nutrition and could only lamely and confusingly conclude that "The interest taken by WHO in nutrition and activities and programmes in which it has participated have had considerable impact of great practical significance. A realization of this aspect and an appreciation in terms of its potentiality for improvement of nutrition of the people in developing countries will help to put in proper perspective the effort made by WHO."¹³¹ The background of this comment was that WHO, relative to FAO and Unicef, had remained relatively inactive in nutrition during the previous fifteen years. WHO's claim to nutritional impact was its 313 fellowships in nutrition which had heightened national awareness of nutrition problems and the 150 nutrition experts it had employed to investigate malnutrition.¹³² WHO's commentary served up the organization's new resolve to alter its tactical approach to hunger-related issues. It stated that WHO expertise rested with its advanced knowledge which could be shared with developing countries "towards working out the solution of **their** problem and training of technical personnel." (emphasis mine)¹³³

The subtle shift away from malnutrition being the responsibility of FAO, WHO, and Unicef and toward its being in the domain of the countries themselves, served a number of purposes. First, it lowered expectations for what the organizations could accomplish. Programmes that attempted to impart advice and aid to interested countries were completing their task in the information transfer itself. Success in such ventures was measured by the number of staff trained, number of conferences organized, or number of scholarships granted. Secondly, increased emphasis on governments acknowledged their vital role in solving persistent hunger problems. Overall, the radical change of direction -- away from a centralized, autocratic approach and towards a decentralized, autonomous one -- was tacit acknowledgment that no agency would be able to run a project with tangible and widespread results without governmental leadership and support. Nevertheless, nutrition and infection could make WHO a reservoir for leading nutrition information.

In 1965 WHO convened an expert committee on nutrition and infection which Scrimshaw chaired. The committee suggested that the high mortality rate for children aged one to four might be attributed specifically to the still undefined synergistic

¹³¹Ibid., p. 15.

¹³²Ibid., pp. 16, 17.

¹³³Ibid., p. 18.

relationship between malnutrition and infectious disease.¹³⁴ The bulk of data in support of this hypothesis had been drawn from a major WHO-, NIH-, and PAHO-supported INCAP study whose publication would not begin for two years.¹³⁵ Since the results of this study were being widely discussed in the cadre of professional nutritionists and investigators, it is worth detailing here. The study, undertaken in the Guatemalan highlands, set out to establish what effect supplemental feeding and integrated health services would have on mortality, with an eye toward the synergism between malnutrition and infection.¹³⁶ Dr. Werner Ascoli, a field epidemiologist, organized the study and selected three villages for the experiment. The village of Santa María Cauqué received medical care and preventive and sanitary services directed toward pre-school children; Santa Catarina Barahona received food supplementation for pre-school children, and Santa Cruz Balanyá served as the control.¹³⁷ The study resulted in several important observations that would have relevant ramifications for future public health nutrition programmes. Infant mortality showed a significant decline only in the feeding village, apparently due to nutritious foods reaching weaning children. Although the IMR dropped in the treatment village, the drop followed a trend developed before the experiment began and was thus not greater than would have been expected. However, in the same village, mortality among children aged one to four showed a fifty percent greater decrease over the expected decline. Even more prominently, in the feeding village the actual decline in mortality of children aged one to four was three times greater than the seventeen percent expected.¹³⁸ The findings thus showed that with an adequate food supply and medical treatment for children, death rates could decline rapidly. The actual numbers

¹³⁴*Nutrition and Infection: Report of a WHO Expert Committee*, Geneva, WHO, WHO Technical Report Series no. 314, 1965, p. 8.

¹³⁵See: N. S. Scrimshaw, M. A. Guzmán, and J. E. Gordon, 'Nutrition and infection field study in Guatemalan villages, 1959-1964: I. study plan and experimental design', *Archives of Environmental Health*, 1967, 14, pp. 657-63.

¹³⁶For a layman's explanation of nutrition and infection interactions see: Nevin S. Scrimshaw, 'Malnutrition and Infection', *Borden's Review of Nutrition Research*, April-June 1965, 26(2), pp. 17-29.

¹³⁷This study is often referred to as "the three-village study". Werner Ascoli, Miguel A. Guzmán, Nevin S. Scrimshaw, and John E. Gordon, 'Nutrition and infection field study in Guatemalan villages, 1959-1964: IV. deaths of infants and preschool children', *Archives of Environmental Health*, 1968, 16, 439-49, on p. 440. For a highly readable and informative description of this study in historical perspective, see: Nevin S. Scrimshaw and Miguel Guzmán, 'A comparison of supplementary feeding and medical care of preschool children in Guatemala, 1959-1964', in N. S. Scrimshaw (ed), *Community-Based Longitudinal Nutrition and Health Studies*, Boston, International Foundation for Developing Countries, 1995, pp. 1-28.

¹³⁸Ascoli et al., op. cit., note 137 above, p. 448.

of deaths were too small to establish statistical significance, therefore the study did not prove either infectious disease treatment or nutritional supplementation to be the preferred means for decreasing mortality. However, this study and field observations highlighted the incidence of diarrhoeal disease as the primary cause of morbidity and mortality in young children.¹³⁹

The WHO nutrition and infection expert committee latched on to INCAP's results and asserted that diarrhoeal disease infections were directly linked to malnutrition and that the influence of infection on nutritional status therefore had to be explored more deeply.¹⁴⁰ The committee members were intrigued by the field trials which had demonstrated that supplementary feeding programmes alone -- with virtually no other public health measures -- lowered morbidity and mortality in the under-five age group.¹⁴¹ Given the new experimental work that had been done since the Scrimshaw, Gordon, and Taylor overview, the WHO experts confirmed that PCM generally had a synergistic interaction with infection and that the same held true of most vitamin deficiencies.¹⁴² In spite of the conceivable relevance of these finding to public health programmes, the WHO committee did not mention any possible applications of their collective findings for other agencies, perhaps due to a scarcity of data from human subjects. Their major recommendations were for continued research and greater emphasis on infection and nutrition in medical and public health worker training.¹⁴³

In historiographical context, the INCAP three-village study bore a striking relationship to the ideas first set forth by Thomas McKeown and R. G. Brown in 1955, and later expanded on in McKeown's 1965 landmark publication, *Medicine in Modern Society*. Contemporary, conventional wisdom during the nineteenth and twentieth centuries attributed improvements in health, particularly the tremendous drops in morbidity and mortality rates, to public health measures and medical advances. To the contrary, McKeown asserted that public health and medicine only affected individual outcomes but had no effect on overall rates. While examining morbidity and mortality in Great Britain, McKeown concluded that nutritional improvements had fuelled the

¹³⁹See: Nevin S. Scrimshaw, Miguel A. Guzmán, Marina Flores, and John E. Gordon, 'Nutrition and Infection Field Study in Guatemalan Villages, 1959-1964: V. Disease incidence among preschool children under natural village conditions, with improved diet and with medical and public health services', *Archives of Environmental Health*, February 1968, 16, pp. 223-34.

¹⁴⁰*Nutrition and Infection: Report of a WHO Expert Committee*, op. cit., note 134 above, p. 19.

¹⁴¹*Ibid.*, p. 10.

¹⁴²*Ibid.*, pp. 12-13.

¹⁴³*Ibid.*, pp. 25-6.

progress in health. In the course of the book, he analysed the possible reasons for declines in mortality in England since 1700 and the resulting population growth. For demographic statistics, he relied mainly on a count of families made in 1086 for the Domesday Book, a survey of the number of hearths by Gregory King in 1695, and the decennial census begun in 1801.¹⁴⁴ One of his most influential though controversial conclusions related to the time period from approximately 1760 to 1851 when England and Wales experienced rapid population growth. Based on his examination of medical techniques of the period, he ruled out therapeutics as having had any impact on the decline in death rate during this time. Further, McKeown believed the drop could not "be attributed wholly to a fortuitous decline in several major infections."¹⁴⁵ Thus, he decided that in spite of the scantiness of evidence, environmental factors such as the improvement in nutritional status, must have been the responsible force. Considering McKeown rarely made reference to contemporary studies of the interactions of nutrition and infection and probably had not followed the three-village study, his conclusions are dazzling.¹⁴⁶ Just as INCAP showed that supplementary feeding programmes appeared to inspire the most significant decline in mortality -- more even than medical treatment and prevention -- McKeown hypothesized that in England's case, much of the historical decline in mortality had been inspired by nutritional improvement.

Improved insights into the nature of nutrition and infection only gradually came to influence FAO and Unicef as WHO presented them to the Joint Committee on Health Policy (JCHP), a policy group consisting of FAO and Unicef personnel.¹⁴⁷ Among the programmatic areas where their effects could be noted was the emphasis of Unicef on nutrition and infection treatment and control. The Unicef Executive Board also began stressing the need for co-operation between food programmes co-ordinated with ministries of agriculture and ministries of health in order to provide for a health component in every project.¹⁴⁸ On a related note, however, Unicef's leadership felt that, overall, the type of advice WHO provided was not sufficiently relevant or of a

¹⁴⁴Thomas McKeown, *Medicine in Modern Society: medical planning based on evaluation of medical achievement*, London, George Allen & Unwin LTD., 1965, p. 22. This book contains an elaboration of ideas first presented in: T. McKeown and R. G. Brown, 'Medical evidence related to English population changes in the eighteenth century', *Population Studies*, 9, November 1955, pp. 119-41.

¹⁴⁵*Ibid.*, p. 58.

¹⁴⁶Although McKeown was cited by the nutritionists from time to time beginning in the late-1960s, I have not come across a McKeown reference to the nutritionists.

¹⁴⁷'Health components in nutrition programmes', June 1965, E/ICEF/528, paragraph 152.

¹⁴⁸*Ibid.*

high enough quality for action to be taken. In Heyward's words, "Unfortunately, WHO's intellectual strength in the fields of public health, maternal and child health, and nutrition has never approached that of its resources in the fields of the various mass campaigns."¹⁴⁹ The success that WHO and Unicef had experienced through campaigns against malaria and yaws had simply not been realized in relation to its MCH programmes, particularly in relation to nutrition. As a result, mass campaigns continued to dominate budgets. Between 1960 and 1964 19.3% of Unicef's programme allocations or 26.1 million dollars targeted nutrition, 7% or 9.4 million went to education, while 67% or 90 million dollars went to health services and disease control.¹⁵⁰ The principal diseases Unicef aid addressed were malaria, tuberculosis, yaws and leprosy.¹⁵¹ None of these diseases had been indicted by the INCAP study on nutrition and infection. These diseases and campaigns were undertaken because WHO and Unicef were interested and, perhaps more importantly, because nations were motivated to assist these projects.¹⁵²

FAO, WHO, and Unicef: Conflict Persists

Whereas the heart of conflict between FAO and Unicef during the late-1950s resided in the division of financial responsibility, during the 1960s the quality and control of technical advice became the divisive issue. On the surface, the arrangements between FAO and Unicef and even between Unicef and WHO seemed entirely plausible and pragmatic. FAO and WHO provided technical advice to countries and to the UN's major aid agency, Unicef. Unicef made use of this advice and thereby improved the quality of its programming. As field workers in the 1950s revealed, however, too often the expert advice came from technicians who had no working knowledge of the countries in which the projects were implemented. As a result, too much of the advice fell on deaf, and increasingly resentful ears. The growing rift between the two agencies provides lucid insights into the evolution of developmental ideology. When the UN established these agencies, it was abundantly clear that they were expected to rely on technicians for project ideas and project approval. While Unicef continued through the 1950s to find the broader technical thinking valuable, local staff felt that they had become the most capable experts in the

¹⁴⁹Heyward, *op. cit.*, note 98 above, p. 8.

¹⁵⁰'Unicef's Part in the Development Decade, 1960-1964', *op. cit.*, note 32 above, p. 10.

¹⁵¹*Ibid.*, p. 18.

¹⁵²E. J. R. Heyward, interview, 5 May 1995.

field. Thus the critical shift that occurred was a tacit recognition of the superiority of experienced field workers to design and implement projects in health and nutrition programmes. In sum, a growing number of Unicef staff were feeling that they were the ones best suited to inform and modify their programmes, not the technicians at FAO. This triumph of practicality over expertise was not well received by FAO's advocates.

In 1961 the task of smoothing over agency relations from Unicef's angle was left to then Deputy Executive Director Heyward. Heyward found his international staff poised against FAO. In a letter to Heyward from G. Sicault, the Director for Europe and North Africa, Sicault wrote of his fears for Unicef: "The big danger I foresee is one tendency in FAO to keep to themselves all the technical guidance, without any interference from Unicef, and to leave to Unicef the financial burden of all such activities."¹⁵³ Thus Sicault feared FAO's monopoly on technical advice: if FAO reserved the right of technical approval over every project or programme, then Unicef was not autonomous. Sicault elucidated his position by writing that he would not object to Unicef being considered a "full partner" in project development with FAO. However, he added that he and others had heard from "different sources" on multiple occasions that joint partnership was not an option and "that it was for FAO to study the problems and then for Unicef to finance the projects."¹⁵⁴ This arrangement was particularly tedious for Sicault since he and his staff often wished to select local experts for technical advice -- a task generally assigned to FAO. Heyward essentially agreed with Sicault and, expressing his personal distaste for FAO's expert practices, stated, "wherever it is proposed to recruit local personnel for expert advice, this will have to be handled by Unicef, though often in some consultation with FAO, for the practical reason that FAO doesn't like it and will never do it."¹⁵⁵ Sicault's and Heyward's perception of events seems historically accurate. The stream of FAO proposals that passed across the desks of Unicef administrators invariably requested supplies and funds but not input or "partnership". In one typical example, an FAO proposal for the design of nutrition education and training textbooks, FAO considered its role as the assumption of full technical responsibility "in assisting governments in

¹⁵³G. Sicault, letter to E. J. R. Heyward, Paris, 5 October 1961, UN Archives, CF9D 79, A027.

¹⁵⁴*Ibid.*

¹⁵⁵E. J. R. Heyward, letter to Georges Sicault, New York, 12 October 1961, UN Archives, CF9D 79, A027.

the testing and modification of" nutrition manuals.¹⁵⁶ FAO informed Unicef that it would have to hire additional FAO consultants to adapt these manuals to individual country needs and nuances. Furthermore, the role left to Unicef was succinct and presented condescendingly: "Unicef's contribution might include supplies and equipment required in the preparation and testing of the textbooks...local transport and the cost of FAO consultants appointed for the project."¹⁵⁷

During 1962, FAO and WHO problems with nutrition experts erupted in Africa. Although the precise nature of the trouble is difficult to glean from correspondence, it is clear that WHO and FAO had given advice that was not well received by Unicef staff or by local officials. In a letter to the Unicef desk officer in Nigeria Heyward wrote "Personally, I am skeptical about the view that every country needs a clinical survey about nutrition before any action can be taken. I am sure it is wrong to hold up efforts to improve the local food supply for children whilst wondering whether it wouldn't be better to spend more money on intestinal parasites."¹⁵⁸ Heyward's criticism stemmed from FAO's and WHO's insistence on an action methodology that began with survey data. By 1964, Unicef desired to be accepted by the UN agencies as more than simply an aid organization -- its leaders wanted it to be at the vanguard of the development community. To Heyward and his colleagues, it was clear that being a member of the "development club", as it was referred to, meant having a different technical arrangement. The means for achieving this independence were unclear, and according to Heyward, at the time, "It would be intolerable if Unicef were to proclaim technical policy, even for children, in the functional fields of health, education, nutrition, etc."¹⁵⁹ In 1964 Unicef apparently overstepped these boundaries when, without consulting a technical agency, it arranged for a clinical test of some new protein foods. That Unicef would undertake such a project without seeking technical approval enraged WHO, which along with the PAG had reserved approval of all protein-rich food developments. Candau, the WHO Director-General, sent a stern and pointed letter on the subject to Pate in which he lay down the following policy: "I have come to the conclusion that in the best interests of the protein rich food programme and also in order effectively to discharge our function

¹⁵⁶'Proposals for an FAO/Unicef project for the preparation of textbooks and manuals for use in education and training programs', Rome, FAO, October 1961, Unicef Archives, 88R025, Box T-006, Tely files, p. 13.

¹⁵⁷Ibid.

¹⁵⁸E. J. R. Heyward, letter to Stewart Sutton, New York, 15 October 1962, UN Archives, CF9D 79, A023.

¹⁵⁹Heyward, op. cit., note 98 above, p. 12.

in this respect, the solution to the present problem is for WHO to take over the entire responsibility for the organization, supervision and evaluation of clinical trials of products developed as a result of the internationally assisted protein rich food programmes."¹⁶⁰ Pate apparently did not contest WHO's position though seeds of resentment were germinating.

The Bellagio Declaration

In April 1964 Unicef, with the support of the Rockefeller Foundation, sponsored an international "Round Table Conference on Children and Youth in Development Planning" at Villa Serbelloni in Bellagio, Italy. The organization of the conference was a ground-breaking split from the past for Unicef. Since its inception, Unicef had been an emergency and aid agency which had low-level working relations with governments in developing countries. Pate, Heyward, and others saw a major opportunity for Unicef in mobilizing planners in developing countries to support Unicef's broad objectives for children. Furthermore, they increasingly believed that if childhood health issues did not inform national planning, then no real progress would be made on the health status of children.¹⁶¹ Herman Stein, a Unicef consultant and planner of the conference, described the culture of the pre-planning, pre-Bellagio era as a disconnected series of actions that were not co-ordinated:

we would work with the Health Ministry, for example. We would send scales and various medicines and, in the earliest days, powdered milk, and other supplies for maternal and child care clinics. We did nothing about affecting food supply because that belonged to a different ministry. Nutrition, in the sense of the cure of severely malnourished children, belonged to the Health Ministry. Very few children could be treated. The basic problem with nutrition had to do with the food situation which belonged to agriculture, and with broad nutrition education in which the Education Ministry and Community Development could be engaged. Agriculture would be making decisions based on the need for improving their import-export position, when the nutritionists were dealing, in many instances, with the consequences of those very decisions.¹⁶²

¹⁶⁰M. G. Candau, 'Memorandum to all regional directors regarding FAO/WHO/Unicef protein rich food programme clinical testing of protein rich foods', 23 April 1965, UN Archives, CF-NYHQ-09.P, DSU: CF/NYHQ/EXD/PRO, folder D0405.

¹⁶¹E. J. R. Heyward, interview, 5 May 1995.

¹⁶²Herman Stein, interview conducted by Jonathan Power, 7 and 16 December 1982, Unicef Archives, interview file, p. 4. Stein first joined Unicef in 1962 as a one-year consultant in the newly-

This gauntlet of assorted ministries had the effect of exhausting Unicef efforts since staff time had to be used for implementing specific aspects of a project in the relevant ministry. FAO and WHO generally were able to keep their work to only one or two ministries, thereby avoiding this bureaucratic circuit. In addition to these difficulties, Unicef administrators had grown frustrated with the labels that called it "a supply agency" and "the junior branch of WHO".¹⁶³ Unicef had frequently taken on programmes that had been discussed by WHO and FAO staff at the governmental level, and many of these programmes had proven to be impractical.¹⁶⁴

While FAO, WHO, and Unicef personnel had suggested policies and positions for governments, Bellagio was the first attempt to work pro-actively toward international humanitarian nutritional policies. Stein believed that Pate was key to the conference's existence: "If Maurice Pate had not been willing to put his neck out for the Bellagio Conference, which required quite a bit of courage -- because this was the first time that Unicef was going out on a limb without asking any of the specialized agencies [permission] -- it would not have happened."¹⁶⁵ The approximately thirty attendees of the conference included representatives from the United Nations Economic Commissions, FAO, WHO, International Labour Organization, and a large contingency of planners from developing countries. Notably, only one trained nutritionist attended, Dr. Gopalan, a ubiquitous figure on expert nutrition committees and at nutrition conferences for over a decade. Autret, then the director of FAO's Nutrition Division, and E. M. Ojala, the chief of FAO's Agricultural Development Analysis Branch, attended as did the acting director of public health services for WHO.¹⁶⁶ Overall, the attendance list was weighted toward social and economic planners who held positions in public administration, development planning, and economic affairs. It was their presence which conferred credibility to the conference

independent country of Tanganyika (Tanzania). From 1964 to 1982, while teaching at Case Western Reserve University, he frequently completed Unicef consultancies and took his sabbaticals at Unicef. Between 1974 and 1983, he served as senior adviser to the Executive Director. Herman Stein, 'International activity 1947-1996, Herman D. Stein', Stein personal collection, December 1995.

¹⁶³Heyward, op. cit., note 98 above, p. 12. The UN Office of Public Information in 1964 was the author of the latter quotation.

¹⁶⁴Stein, op. cit., note 162 above, p. 1.

¹⁶⁵Ibid., p. 11.

¹⁶⁶FAO Nutrition Division's limited involvement in the planning of the conference may have been in part due to Autret's serious bout of tuberculosis which incapacitated him throughout 1963. Nevertheless, Autret looked forward to the meeting and communicated to Pate that he thought it would be "a mile stone [sic] on the long way to eradication of malnutrition in children." Marcel Autret, letter to Pate, 30 September 1963, Autret personal collection.

and its declaration. According to Victor Soler-Sala, then a Unicef programme officer in Santiago, "Bellagio was a very important watershed" because it brought together the planners such as Professor J. Tinbergen, the head of the Economic Institute of the Netherlands, "who legitimized the relationship of planning and children."¹⁶⁷ Moreover, Soler-Sala stated that Bellagio was the first effort to look at children's needs beyond the imperative context of supplies and equipment and that this breakthrough led to recognition that fields besides vertical campaigns had to be pursued rigorously.¹⁶⁸ In this sense, the conference boosted the position of nutrition since it remained a relatively under-funded and under-explored subject area. The event was seen by Unicef staff as an opportunity to move the organization beyond being identified as a direct action agency and toward also being considered a leader in development planning.¹⁶⁹ The flip-side of this development was, in Heyward's words, that Unicef was "getting above itself, and that it cannot give advice on taking account of children in national development, without getting into functional fields where it has no competence."¹⁷⁰

The Bellagio round-table's principal object was to examine how economic and social policies aimed at development could best meet the needs of children. According to Stein, who also served as a rapporteur at Bellagio, prior to Bellagio Unicef had no substantial connections with planning departments. Further, Stein asserted that the central problem of all ministries was that none was responsible for young children: ministries of education were responsible for school age children, and ministries of health for children under the age of two. This was the foundation for policies that overlooked the needs, in particular, of young children; no one was responsible for them.¹⁷¹ For Unicef, which was looking toward countries more than ever to fund and create their own development programmes in health, the round-table was a crucial discussion for mapping out Unicef's role in national development plans. While economic development was in part the springboard for discussion, at the heart of the conference was a call for developing nations to formulate national policies for children. The conference organizers requested that these policies include specific objectives related to health and nutrition to be reached within established periods of time. Bellagio demonstrated that the jargon of the Cold War had been unmistakably injected

¹⁶⁷Victor Soler-Sala, interview conducted by John Charnow, 19-20 January 1984, Unicef Archives, interview file, p. 5.

¹⁶⁸Ibid., p. 6.

¹⁶⁹'Unicef's Part in the Development Decade, 1960-1964', op. cit., note 32 above, p. 29.

¹⁷⁰Heyward, op. cit., note 98 above, p. 18.

¹⁷¹Stein, op. cit., note 162 above, p. 1.

into policies for international development. By achieving material objectives for the young people in every country, the conference sought to "strengthen the transmission of fundamental values such as honesty, democratic attitudes, loyalty to home and country, and a deep sense of international understanding and solidarity."¹⁷² Planning, particularly national planning, was the basis of the declarations which emerged from Bellagio. Since previous plans for nutritional development had generally been requested of UN agencies from low-level ministries, the policy makers at Bellagio wished to elevate the level at which nutritional policies were formulated. Arguably, by having such dialogues on a national level, they would be able to construct more effective policies that would be sustainable and more effective.

The Unicef argument for government planning that accounted for children's needs contrasted with the nature of cumulative nutrition development work. For well over a decade, the UN agencies had consistently followed a scientific formula for programming recommendations. First, nutritionists, economists, and other researchers had identified problems and collected funding for further analysis. Then, agencies had drawn up broad surveys of the prevalence of the problems and, working with technicians, proposed solutions. Lastly, these solutions, or projects furthering their end, were funded by Unicef, ministries of health and other agencies. At Bellagio, this framework was subverted. Apparently having tired of the ambiguous and misleading nature of statistics, the participants proposed that the goals of policy be "expressed in terms of social values rather than in quantitative terms."¹⁷³ Contradicting the tentative and hyper-analytical nature of technicians at the UN agencies, the conference declared, "Insufficient quantitative data need not preclude a programme of action. Among the guiding criteria for such action may be the correction of flagrant distortions or inequities, such as in balances in the development of the educational system or unusually high rates of nutrition disorders in certain geographic areas within the country".¹⁷⁴ In essence, the conference participants affirmed that the problems afflicting children were too enormous to wait and study before taking action -- in nutrition especially, it was imperative for nations and communities to mobilize behind programmes, even if the programmes were not firmly based on scientific evidence. In spite of the atmosphere of general agreement with the Bellagio priorities, FAO gave the results of the conference a cool reception. Autret and Ojala reported to FAO that

¹⁷²*Children and Youth In Development Planning: Conclusions of a round-table conference held at Bellagio, Italy, 1-7 April 1964*, New York, Unicef, 1964, p. 4.

¹⁷³*Ibid.*, p. 5.

¹⁷⁴*Ibid.*

"one may wonder whether Unicef resources are on the level of their new ambition."¹⁷⁵ Given the grandiose demands of Bellagio, they believed that further expansion of Unicef's commitments would continue to spread the agency too thin and limit its success. That said, Autret and Ojala suggested that FAO seriously consider co-operating with Unicef on these ideas which were "new in Unicef, not of course in FAO."¹⁷⁶

To the participants at Bellagio, the central problem was clear: children were hungry, and massive action had to be taken. In their opinion it should not be necessary to ascertain just how many were suffering, their symptoms, and the causes, because the goal of adequate nutrition would inevitably eradicate the central nutritional deficiencies. Nevertheless, the participants did call for "periodic and systematic assessments of the situation of children and youth" in order to evaluate past efforts and improve methodologies.¹⁷⁷ The de-emphasis on data reflected more of a desire for tangible and immediate action than a devaluation of relevant studies. The concern of the planners was that in the past, the type of quantitative data collected had not been relevant to planners.¹⁷⁸ While some nutritionists supported this contention, it was nevertheless widely asserted that past efforts to form and make use of national nutrition committees had been failures, perhaps due to the breadth of the problem and the paucity of funds and preventive information.¹⁷⁹

While previous conferences had often cited how inherent social inequities resulted in the nutritional problems seen in children, Bellagio was the first to make the correction of these macro issues -- in order to improve food and nutritional status -- the priority. "Fiscal policy, redistribution of income, price policy directed to foods, subsidized family housing" and other methods were encouraged as means of improving the lives of children.¹⁸⁰ The conclusions ultimately said little of malnutrition, except that it, along with infectious disease and poor sanitation, were the primary causes of childhood morbidity and mortality.¹⁸¹ The conference urged planners to consider these health problems in the formulation of all development policies. Unicef further

¹⁷⁵Marcel Autret and E. M. Ojala, 'Report of Unicef round table conference on planning for the needs of children', Rome, April 1964, Autret personal collection, p. 3.

¹⁷⁶*Ibid.*, p. 4.

¹⁷⁷*Children and Youth In Development Planning*, op. cit., note 172 above, p. 8.

¹⁷⁸*Ibid.*, p. 9.

¹⁷⁹Nevin S. Scrimshaw and Moisés Béhar, 'Causes and prevention of malnutrition', in G. H. Beaton and E. W. McHenry (eds), *Nutrition: A Comprehensive Treatise*, New York, Academic Press, 2, 1964, 385-434, on p. 426.

¹⁸⁰*Children and Youth In Development Planning*, op. cit., note 172 above, p. 6.

¹⁸¹*Ibid.*, p. 10.

looked forward to dovetailing its new country approach with national planning, though this would not soon be realized since few countries had national policies for children.¹⁸² Since every national plan would be different, Unicef's new flexibility, its leaders hoped, would allow the agency to play a dynamic role in development. According to Stein, Bellagio allowed Unicef to cross an "organizational threshold" and become a real player in development. Through accenting Unicef's field experience, Stein believed the conference "highlight[ed] the importance of greater independence for Unicef in relation to the specialized agencies".¹⁸³ Pate felt that the conference was a huge success and optimistically wrote J. G. Harrar, then president of the Rockefeller Foundation, that "in the follow-up of these deliberations we are going to see that real action ensues in the field in which we are engaged."¹⁸⁴

Evaluation: How Are We Doing?

While it was clear that nearly every year every UN agency had a larger budget than the year before, and increased funds were spent on nutritional projects, few experts had any idea how effective projects were. In the sixth report of the Joint FAO/WHO Expert Committee on Nutrition, the committee reiterated the previous meeting's concern that evaluation of WHO and FAO results be carried out. Weakly, the committee "noted that the subject of evaluation had been discussed at a number of regional seminars and meetings and that short-term consultants had been employed to give some guidance on this matter."¹⁸⁵ Further, the committee members stressed the development of evaluation criteria for applied nutrition programmes.¹⁸⁶ Evaluation was coming to the fore in the early-1960s; Heyward noted in 1965 that the Unicef Executive Board, "conforming to a tendency throughout the United Nations in the last few years, has asked for more attention to evaluation, to see what has been really accomplished".¹⁸⁷

¹⁸²Heyward, op. cit., note 98 above, p. 17. For an expanded view of the shape of Unicef's nutrition policy after Bellagio see: 'Unicef policy on aid to nutrition programmes', New York, Unicef, Dir/CON/June 1965/WK/3, Unicef Archives, CF-NYHQ-05ANS-005.

¹⁸³Stein, op. cit., note 162 above, p. 2.

¹⁸⁴Maurice Pate, letter to Dr. J. G. Harrar, 16 April 1964, New York, UN Archives, CF-NYHQ-09.E(64-80), G0013.

¹⁸⁵*Joint FAO/WHO Expert Committee On Nutrition, Sixth Report*, op. cit., note 42 above, p. 5.

¹⁸⁶*Ibid.*, p. 65.

¹⁸⁷Heyward, op. cit., note 98 above, p. 1.

The idea of critical evaluation -- of objectively identifying the benefits of specific projects -- was a concept only rarely brought up in major forums. Often when such evaluations were conducted, the tempestuous results drained any reasonable recommendations of their force. While head of the FAO Nutrition Division, Autret pursued the topic cautiously during the early-1960s. In a paper he distributed to colleagues at the three agencies, he carefully examined the past methods for conveying aid to pre-school children, ostensibly the central objective of nutrition projects since the mid-1950s. Increasing concern for the pre-school child inspired Autret as recent data were revealing that while the IMR in developing countries was often six to eight times as high as the level in developed countries, the mortality rate for pre-school children was often from ten to sixty times higher. Thus, it was feared that while preventive measures taken during the first year of life might decrease the IMR, the net effect of the savings would be diminished as a large number of these infant survivors perished during early childhood.¹⁸⁸

Autret criticized the numerous committee meetings and conferences during the previous ten years that, while being concerned broadly with malnutrition in young children, did not pay "sufficient attention to the major problem of where, when, and how to reach the young child in the age range from 6-12 months to 4-5 years" and wished to formulate a comprehensive policy toward the problem for FAO.¹⁸⁹ He stated that in addition to the nutrition education programmes that had been popularized, supplementary feeding programmes might return to vogue as governments' consciousness of childhood malnutrition rose. To Autret there were indirect and direct preventive measures that could be taken. The indirect measures involved a general increase in productivity, standard of living, and other socio-economic indicators. The direct measures called for teaching mothers to provide protective foods to their children and "to assure free distribution of them [high-protein foods] by the state or the community if they are not available or cannot be bought."¹⁹⁰ Autret's commentary sounded much like Orr's World Food Plan: only socio-economic

¹⁸⁸For example, see: 'Protection of the pre-school child', Manila, WHO, Regional Committee Provisional agenda item 15, 22 June 1964, Unicef Archives, CF-NYHQ-05ANS-001. See also: 'Pre-school child malnutrition: primary deterrent to human progress', op. cit., note 118 above, p. E41. The latter document noted that the IMR in the Philippines in 1962 was 68 while in the U.S. it was 25. On the other hand, the mortality rate for children aged one to four was 45 per thousand in the Philippines whereas it was one per thousand in the U.S.. (p. E46)

¹⁸⁹Marcel Autret, 'Nutrition of the pre-school child: a consideration of new approaches', 15 July 1963, Unicef Archives, PR-NU-001. This paper expanded on ideas Autret presented at the 6th International Congress of Nutrition in Edinburgh.

¹⁹⁰Ibid., p. 4.

improvements lead to permanent improvements in nutrition; while you await them, make sure that hungry children eat what they need. In sum, Autret resolved that the women's associations that could be found in many parts of the developing world were the best "mass solution" for reaching mothers and young children. He envisaged using these forums for imparting nutritional knowledge and supplementary foods. In his estimation, "The struggle against under-nutrition and malnutrition among children of pre-school age is insignificant considering what has been undertaken against certain diseases no more lethal and no more prominent."¹⁹¹

Autret's paper was, in historical context, an interesting example of how, for some, nutrition developments and project initiatives did not represent a significant fight against childhood hunger and malnutrition. More than fifteen years after Orr's World Food Proposal, FAO's top nutrition administrator was as perplexed and frustrated with the slow rate of progress as Orr had been. For all the technological breakthroughs of the previous decade, Autret stressed massive supplementary feeding using local sources and women's education as the primary means for progress.

Several colleagues' confidential responses to Autret implied that his ideas were contentious and reveal how the only consensus that had been reached by nutritionists was that childhood malnutrition was the major public health concern in developing countries: all other issues were clouded. In a candid response to Autret from Dr. Francois Remy, the FAO nutrition adviser to Unicef, Remy took issue with much of Autret's presentation: "You make an inventory of the services which might play a role in the struggle but...you condemn them conclusively."¹⁹² Remy found Autret's critical analysis "traumatic" and suggested that perhaps Autret's shortcomings were at the root of his examination: "At this point isn't it true that you allow some impatience and bitterness to show through, because you were not able to change the situation as you wanted? You oblige all those who have worked along the same lines to realize that they have failed, except perhaps in the case of a few pilot projects."¹⁹³ Remy fumed that while Autret's suggestions were sound and nothing particularly new, they alone could not overcome the prominent obstacle of persuading mothers, governments, and agencies to undertake them. In conclusion Remy asserted that any plan to distribute high-protein foods on a large scale to villages and communities in every country, although simplistic in concept, was unfeasible. It simply did not consider the realities of implementing nutrition programmes in the field. Remy's criticisms were echoed in

¹⁹¹Ibid., p. 12.

¹⁹²Francois Remy, letter to M. Autret, 30 September 1964, New York, Unicef Archives, PR-NU-001.

¹⁹³Ibid.

the correspondence of his WHO colleagues.¹⁹⁴ WHO staff members felt that there were naïve assumptions throughout the article and that "Although it is tempting for all of us to propose quick and relatively simple solutions to the urgent problem of malnutrition in children of pre-school age, experience has not demonstrated that our objectives can be met by increasing the number of beneficiaries of our programmes without giving them assistance on a technically defensible level."¹⁹⁵

The debacle which followed Autret's paper on one level draws attention to the gaps between major figures in nutrition policy. Remy held a key position in FAO's Nutrition Division and in the making of Unicef nutrition policy since he served as the FAO/Unicef liaison and worked intently with Heyward. His vision of expanding the applied nutrition and other programmes that had been born in the late-1950s did not differ radically from Autret's ideal -- nor from the ideas espoused by WHO and Unicef.¹⁹⁶ Ideologically the incident illuminates the central frustration of nutrition: from optimists and pessimists alike, from administrators like Heyward to Autret, no one felt that anything significant had been accomplished in the fight against hunger and malnutrition in young children. Heyward soberly remarked in 1965: "Nutrition has remained up to the present a difficult field, if one wants to go beyond handing out food surpluses."¹⁹⁷

Evaluation continued to be only a mercurial influence on projects during the following years. By 1964, Unicef, FAO, and WHO had a total of fifty ANPs in thirty-five countries. WHO and FAO were irked by Unicef's hesitation to evaluate the effectiveness of the programmes -- undoubtedly due in part to its long-held distrust of experts. Early in 1965, Pate died and Henry Labouisse took office. Although Pate had planned to retire during the summer of 1965, his death nevertheless represented a tremendous loss for Unicef. Staff saw Pate as the father of Unicef since it was his vision that had safely ushered Unicef through the traumatic early-1950s and redefined the organization's *raison d'être*. However, staff agreed that Pate was actually not the

¹⁹⁴Chief MCH, letter to Bengoa, 25 June 1964, WHO Archives, box A.0917; Dr. L. Verhoestraete, letter to Autret, 1 July 1964, WHO Archives, box A.0917; Dr. John Burton, letter to Bengoa et al., 25 June 1964, WHO Archives, box A.0917.

¹⁹⁵Chief MCH, op. cit., note 194 above.

¹⁹⁶See: 'Protection of the pre-school child', op. cit., note 188 above. The reaction to Autret's paper among Unicef's staff must not have been extreme since the Unicef information officer suggested publishing the paper in *Unicef News*. Bernard Gerin, letter to Autret, 17 October 1963, Autret personal collection.

¹⁹⁷Heyward, op. cit., note 98 above, p. 5.

administrator of Unicef; he was a fund-raiser and politician.¹⁹⁸ Although Pate had known Labouisse peripherally for years, he was familiar with Labouisse's long record of public service and had hand-picked him as successor months before his death. Among other impressive positions, Labouisse had been the chief of the Marshall Aid mission in France, the head of the UN agency for Palestinian Refugees (UNRWA), a consultant for the World Bank, and the head of the International Cooperation Administration (US AID's predecessor).¹⁹⁹ Thus, when Labouisse became Unicef's Executive Director, he had vast international and development experience. Heyward prepared a lengthy memorandum to brief Labouisse and the first heading related how the Unicef "Board, conforming to a tendency throughout the United Nations in the last few years, has asked for more attention to evaluation, to see what has been really accomplished, and what experience might indicate to be desirable modification of Unicef assistance policies."²⁰⁰ After Bellagio, the need for evaluation had become more important since, according to Stein, planning required monitoring programmes as they were operating.²⁰¹ Just weeks following the conference, Unicef and WHO began high-level discussions on the evaluation of projects they undertook jointly.²⁰² In this new climate, WHO and FAO also agreed on the need for evaluation, especially of ANPs, and proceeded with a meeting of experts in 1965 to discuss evaluation protocols.²⁰³ At that meeting, the experts agreed that past evaluation had often been performed on an ad hoc basis and that a systematic approach was required.²⁰⁴ In keeping with developments in evaluation, the Unicef Board scrutinized ANPs and requested that future projects make use of baseline data which could later be used for evaluation.²⁰⁵

It may be that the decision-making process at Unicef was the force responsible for tardy implementation of evaluation. Stern pointed out that "in the culture of

¹⁹⁸Julia Henderson, interview conducted by John Charnow, 30-31 July 1983, Unicef Archives, interview file, pp. 16-17.

¹⁹⁹Charnow and Moe, *op. cit.*, note 1 above, pp. 8-11.

²⁰⁰Heyward, *op. cit.*, note 98 above, p. 1, see also: p. 20.

²⁰¹Stein, *op. cit.*, note 162 above, p. 9.

²⁰²D. B. Sinclair (Unicef Deputy Executive Director), letter to P. Dorolle (WHO Deputy Director-General), 24 April 1964, WHO Archives, folder 1, box A.1067.

²⁰³'Review of the Organization's programme in nutrition, 1948-1964: report by the Director-General', *op. cit.*, note 91 above, p. 27.

²⁰⁴*Report of the Joint FAO/WHO Technical Meeting on Methods of Planning and Evaluation in Applied Nutrition Programs*, *op. cit.*, note 30 above, p. 12.

²⁰⁵'Recommendations of the fifth session of the FAO/Unicef joint policy committee', New York, 29 April 1965, E/ICEF/512, p. 3.

Unicef, [there was a] reluctance to be overtly critical of anybody, especially in executive ranks. You assume that people are competent, which is generally a safe assumption, and you assume that they want to do what is best for the organization - which is usually also a reasonably safe assumption."²⁰⁶ Extrapolating Stern's commentary on Unicef operations, evaluation would have been a tool for uncovering embarrassing incompetence and, perhaps more harmfully, illustrating how the best intentions did not necessarily result in the best projects. Thus, the new-found interest in evaluation reflected deeper concerns that applied nutrition was not having the desired effect on development concerns. In retrospect these agencies identified the mid-1960s as the starting point of their concerted efforts to assess technical assistance and programming.²⁰⁷

A New Rhetoric

Many new programmes and development tactics began in the 1960s as old agencies adopted new directives and formed new relations. WFP began in 1961, and in 1964 FAO began joint activity with the International Bank for Reconstruction and Development (IBRD) to support agricultural development. Moreover, late in 1965, the United Nations Development Programme (UNDP) was founded, which sought to expand on technical assistance in the field and subsumed ETAP and the United Nations Special Fund.²⁰⁸ UNDP was a tremendous new source of funds for FAO since it had funds slated for technical assistance. On the programmatic side, the FFHC and Bellagio Conference were emblematic of new streams of enthusiasm and methodology in hunger policy. Martin Sandberg, a Unicef programme officer and representative during the 1960s, believed that for Unicef, the decade represented the golden years. Sandberg warmly recalled that "Unicef began to be respected by the developing countries...as somebody ready and willing to provide material aid,...as a source of support to the country's own desire to develop, and as a partner in thinking through some of the development priorities and problems."²⁰⁹

²⁰⁶Stein, op. cit., note 162 above, p. 18.

²⁰⁷Jean W. McNaughton, 'A review of FAO's activities in nutrition education and training 1949-1977', paper presented at International Conference on Nutrition Education, Oxford, 31 August-7 September 1977, Unicef Archives, PR-NU-002, p. 5.

²⁰⁸Phillips, op. cit., note 91 above, pp. 72-73.

²⁰⁹Martin Sandberg, interview conducted by Herman Stein, 8 September 1983, Unicef Archives, interview file, p. 39.

The various tropes of nutritional thought that have been described in this chapter -- from national planning ideology to the relationship between hunger and productivity -- came to form a complex tapestry of policy-making in the mid-1960s. It seemed that one could no longer discuss supplementary feeding programmes without questioning their long-term impact and highlighting the need for preventive medicine. By the same token, one could not speak about general nutritional improvement without stressing national planning and economic productivity. Thus, when FAO and Unicef gathered in 1965 to discuss "Planning for the food and nutritional needs of children", the focus was not on applied nutrition projects, training, and nutrition education as it would have been just five years earlier. Rather, in the new post-Bellagio environment, the policy makers examined the dearth of nutritional objectives in economic and social development plans which, they believed, was "inconsistent with the low level of nutrition which has now been identified as one of the main factors explaining the low productivity in developing countries."²¹⁰ One of the agencies' new purposes, then, was to convey what type of information governments needed in order to competently and meaningfully unite nutrition with national development. At times, however, the goal of improved nutrition seemed at odds with national development. In 1965 Heyward remarked that the Unicef Board began to sense that some European governments were scaling back their assistance to Unicef since they believed that social progress was outpacing economic development and that Unicef's work might be exacerbating the population explosion.²¹¹ This new view of the race between development and population had been at the centre of the FFHC, though the population issue on its own had been neglected. In 1965 a Johnson administration task force report in the U.S. echoed these concerns and lamented that hunger was obstructing the U.S. desire for economic development in developing countries. As a result, the U.S. Agency for International Development was asked to "give top priority to the problems of food supply, malnutrition [sic] and population increase in preparing country development plans."²¹²

In spite of new programmes and technological progress in the area of high-protein foods, clearly, developmental efforts were not having a profound or even noticeable global effect. The FFHC began and continued without substantive strides being made in the effort to improve food supplies and levels of childhood malnutrition.

²¹⁰FAO/Unicef Joint Policy Committee", New York, 31 March-3 April 1965, FAO/Unicef/J.P. 65/1, Unicef Archives, CF-NYHQ-05ANS-002, p. 1.

²¹¹Heyward, op. cit., note 98 above, p. 21.

²¹²Felix Belair, Jr., 'Hunger imperils U.S. AID program', *New York Times*, 1 August 1965, p. 62.

The failure of these efforts to generate the international will to decisively attack hunger and malnutrition led some to adopt increasingly pessimistic rhetoric. Aaron Altschul, the master food technologist who determined how to remove the toxic gossypol from cottonseed, was a significant influence on protein matters who recognized the growing link between protein and politics. In his 1965 book, *Protein: Their Chemistry and Politics*, he noted that many scientists in his field believed that "the only effective solutions to problems of malnutrition are simple ones" since these were the only method of impacting health rapidly.²¹³ Although Altschul agreed that simple solutions to protein problems could improve nutritional status, he asserted that their chief advantage was that they allowed public health workers, leaders, and scientists time to design lasting and more effective solutions. In his view, "the simple approach is at best only a temporary expedient and does not succeed in coming to grips with the basic problem: that of developing a system of organization and a technology which will allow maximum production of food at the lowest cost".²¹⁴ The solutions which had been seen up until then had, in Altschul's opinion, imposed an undue burden on housewives and other family members to use simple solutions to achieve progress. This tactic, which might well have characterized applied nutrition programmes and supplementary feeding projects, was destined to achieve little since "No other field of endeavor has succeeded with simple solutions."²¹⁵ According to him, sophistication alone could lead to permanent change and it would have to involve initiatives above the family and village level involving "expenditures for plants and equipment, and other concomitant social and economic changes."²¹⁶ Thus Altschul, along with many of his colleagues, turned his back on the "solutions" promoted by development agencies, believing that only high-level structural changes could have a marked effect.

While few outwardly supported an opinion akin to Altschul's, his reasoning provides a useful paradigm for framing the action which WHO, FAO, and Unicef had taken. On a number of levels their funding went toward these "simple solutions" aimed at altering nutrition habits on a family level (which Altschul felt was unlikely to be accomplished through education), training health workers, or developing other simple solutions. However, the early-1960s reflect a new emphasis on operating at a higher governmental level, as seen in the FFHC and at Bellagio. The change emerged

²¹³Aaron M. Altschul, *Proteins: Their Chemistry and Politics*, New York, Basic Books, Inc., 1965, p. 299.

²¹⁴*Ibid.*, p. 300.

²¹⁵*Ibid.*

²¹⁶*Ibid.*

partly from deepening fears that current programmes were failing to have the desired effect and that the forces with which they would have to contend were becoming overwhelming. Altschul clinically described this problem: "Given the present trends, it can be expected that the food problem will increase in severity with time under the existing patterns²¹⁷ food procurement and distribution." Others too were filled with a good deal of fear when they considered future food problems.

A speech Scrimshaw gave late in 1965 well mirrored this new thinking. In 'The Urgency of World Food Problems' Scrimshaw remarked, "We must face certain hard facts...It is evident that the rapidly worsening world food situation can be permanently improved only by two measures-a more rapid increase in food production in the developing countries and a less rapid increase in population."²¹⁸ Development projects, at least of the type sponsored by FAO, Unicef, and WHO were doing something to stem the misery in developing countries, but not much toward altering the larger picture of impending crisis. Scrimshaw, ever more impressed by temporal concerns, gloomily concluded, "For our own future and that of the entire world we must soon begin to succeed, or it will be too late. We have a little more time, but not much more."²¹⁹ In Scrimshaw's mind's eye, the storm of misery -- threatening the lives and well-being of millions -- could already be sighted on the horizon. During the next few years it would be his and his colleagues' position to illuminate that storm for the world or at least for international agencies.

²¹⁷Ibid., p. 190.

²¹⁸Nevin S. Scrimshaw, 'The Urgency of World Food Problems', address to the Annual Meeting of the American Freedom from Hunger Foundation, Washington, D.C., 18 October 1965, Scrimshaw personal collection, p. 3.

²¹⁹Ibid., p. 9.

Chapter VI

Nutritional Politics

Since nutritional science is of immediate social consequence, nutritionists must perforce publicly take positions on issues of national and international concern. Having established such a position, the scientist is subjected to that great danger of becoming a politician of science, a 'theoretician', of espousing a dogma. He fears that a revision of his position will cause him to lose face and therefore he may cling to all evidence, even outdated or unsound, to sustain a previously announced position.

William Darby, Professor of nutrition, Vanderbilt University, 1966¹

The Rhythm of Change

While many of the currents in nutritional history, such as the rapid change of Unicef's focus toward the pre-school child, reflect the swiftness with which transformations in policy and scientific focus could occur, innovation generally marched at a torpid pace. The dried milk distribution programmes of the 1950s, in spite of evidence that they could be harmful, continued to be implemented by one agency or another for decades. Similarly, high-protein mix development programmes, ANPs, and other undertakings which had spotty track records proceeded to receive top priority. Stasis in policy itself can be found through these years: the *FAO Manual On Food and Nutrition Policy*, first published in 1969, was actually written in 1966 and was published and translated in its final form well into the 1970s.² General nutrition policy did not contain radical changes on a year-to-year basis. Nevertheless, the arena in which central concerns of the UN agencies were formulated allowed for apparently pressing issues to seize attention and resources rapidly. This dissertation discusses the introduction of various nutritional issues into this arena and the way in which new, frequently scientifically-espoused ideas, transformed the landscape of policy over time. We saw toward the end of 1965 that a new tone of dismay over the breadth of nutrition issues was introduced into the elocution of nutritionists. This chapter and the next are in part concerned with how this dismay rose to deafening

¹William J. Darby, 'Nutrition research for the future', provisional agenda item 13, Joint FAO/WHO Expert Committee on Nutrition, 25 October 1966, NU: FAO/WHO/NU/13, LSHTM Archives, Payne papers, FAO/WHO expert committee box, p. 5.

²J. P. Greaves, interview, 16 February 1996.

proportions within a few years and distracted attention from broader hunger and malnutrition concerns.

FAO's *Manual on Food and Nutrition Policy* provides a springboard for a broad discussion of nutrition policy during the late-1960s. Marcel Autret, then director of the FAO Nutrition Division, wrote in the foreword to the ninety-five page manual that current nutrition activities had been re-tooled to target the prevention of malnutrition and the elimination of undernutrition. This was hardly a recent development since these changes had spearheaded nutrition policy reform since the mid-1950s. Nevertheless, Autret asserted that nutrition policy and activities could best be approached by combining the forces of the "agronomists, technologists, economists and educators" who would work "with the nutritionist, who is now considered an indispensable partner in this effort."³ Reflecting the influence of the Unicef Bellagio conference, Autret suggested that these professionals would create programmes in the broader context of national plans. At a time when the planners, economists, and nutritionists were still debating the fundamental issues related to malnutrition and hunger, it is remarkable that FAO was so bold as to publish a blueprint for action. Within FAO itself, there was little agreement about the primary causes of hunger and malnutrition and approaches to its treatment and prevention. Although the *Manual on Food and Nutrition Policy* was not meant as the consummate guide to arranging policies, it did seek to frame malnutrition and hunger in similar terms throughout the developing world. The authors sketched a rough and largely ambiguous methodology for forging nutrition policies which began with an evaluation of existing nutrition problems and followed with a national planning approach. They asserted that the augmentation of existing food production was of vital importance and that the resulting additional food was to be either purchased or distributed through food distribution schemes. Additionally, health workers would provide the necessary education to solidify nutritional changes and encourage healthy eating habits.⁴ Thus, the basic recommendations had changed very little from ideas pronounced even two decades earlier by Orr. National planning aside, the solutions resonated with calls for increased support for the familiar programmes of the previous decade: high-protein food development and applied nutrition programmes.

An examination of nutrition initiatives during the second half of the 1960s reveals that there were no great new initiatives for policy makers. Instead, analysts

³B. F. Johnston and J. P. Greaves, *Manual on Food and Nutrition Policy*, Rome, FAO, FAO Nutritional Studies no. 22, 1969, foreword.

⁴*Ibid.*, pp. 32-42.

pored over old programmes searching for improvements to be made, while leaders critiqued their policies and identified largely bureaucratic reasons for the failure of nutritional programmes. Within Unicef, administrators long tired of mediocre results from joint Unicef/FAO projects took out their frustration on the FAO Nutrition Division. At the same time, many nutritionists continued to rally behind the threat of a world protein gap which, they predicted, would be responsible for increased misery and malnutrition in developing countries. The nutritional environment of the late-1960s provided nutritional programmes with time to evolve while the political climate around many nutritional issues began to heat up.

The Whole Society Is The Patient

Through the 1960s, the protein in PCM continued to dominate scientific dialogue and programme planning. Although the sixth report of the FAO/WHO Joint Expert Committee on Nutrition mentioned the importance of marasmus in developing countries that were rapidly urbanizing, it reassuringly suggested that current protein-rich food programmes were in part designed to address this problem.⁵ By 1966, Donald McLaren, still conducting impressive nutritional research at the American University in Beirut, felt that the focus on kwashiorkor had drawn the pendulum too far away from marasmus as well as from the importance of calories and infection. His experiences in Lebanon guided his frustration:

we [nutritionists] didn't know [then] what to do with this marasmus...I would go into a children's hospital during the summer in Beirut and half the kids were sort of skin and bone and you just couldn't sort of cope with it. It didn't strike you as being a nutritional problem at all; these kids are badly neglected and that's what happened when you neglected children, they can't eat, you don't feed them and that's all there is to it.⁶

In the *Lancet*, he vented his feelings by publishing another article highly critical of the nutritional establishment and sure to attract the attention of policy makers. By this time, PCM had come to define itself as a category of disease, even though it could exhibit radically different manifestations and arise from dramatically different causes.

⁵*Joint FAO/WHO Expert Committee on Nutrition, Sixth Report*, Rome, FAO, FAO Nutrition Meetings Report Series no. 32, 1962. This attitude was expressed again a few years later by the same committee. See: *Joint FAO/WHO Expert Committee on Nutrition, Seventh Report*, Geneva, WHO, Technical Report Series no. 377, 1967, p. 60.

⁶D. S. McLaren, interview, 6 October 1995.

McLaren felt that this inept categorization and rigid nomenclature had led clinicians "to lump all malnourished children together and ignore the pronounced contrasts not only between the polar disorders, marasmus and kwashiorkor, but also between marasmus and marasmic kwashiorkor."⁷ To McLaren, these distinctions were of vital importance especially in Beirut, where the incidence of kwashiorkor was low and marasmus was common. Since kwashiorkor tends to strike children aged one-to-four years of age and marasmus affects those less-than-one, McLaren believed that it was important to lure increased attention to the neglected younger age group.⁸ Citing the heightened recognition of malnutrition in pre-school children which we witnessed in the last chapter, McLaren argued that marasmic infants were being overlooked at a time when their mortality and morbidity were rising.⁹ While kwashiorkor was still being trumpeted as the leading nutritional disease in the PCM spectrum, McLaren defied the conventional wisdom and asserted that nutritional marasmus was, in fact, the most pressing and significant element.¹⁰ Thus, McLaren drew a new line across the nutritional field which pitted the nutritionists interested in protein and kwashiorkor against those focused on calories and marasmus.

McLaren's views on hunger and malnutrition were not overtly embraced by nutritionists. In Hamburg during 1966, McLaren was a speaker at the Seventh International Congress on Nutrition. Congress organizers had asked him to discuss a protein mixture being used at the American University in Beirut. After reading a paper on a related subject, McLaren volunteered another, unsolicited piece.¹¹ In it, he criticised the rationale behind most protein mixtures and contended that although protein mixtures might be appropriate for preventing kwashiorkor, they might do little for the massive problem of nutritional marasmus. McLaren recounted that Autret, "that French pharmacist", and Scrimshaw "were livid...I saw them change color [as I spoke] and the chairman said 'we'll break'."¹² McLaren claimed that during the break, peers approached him and sympathetically said, "this is terrific but we're scared we're going to have our grants cut [for protein research]."¹³ During the discussion of the

⁷Donald Stewart McLaren, 'A fresh look at protein-calorie malnutrition', *Lancet*, 27 August 1966, 485-88, on p. 485.

⁸*Ibid.*, p. 485.

⁹*Ibid.*

¹⁰*Ibid.*, p. 488.

¹¹See: D. S. McLaren, Pergrouhi Asfar, and Beatrice Zekian, 'Liver Pathology and vitamin A storage in children recovering from protein-calorie malnutrition', in *VIIth International Congress of Nutrition*, Hamburg, 3-10 August 1966, Hamburg, Herlusgeber Publishers, 1966, pp. 108-11.

¹²D. S. McLaren, interview, 6 October 1995. Autret was not a trained nutritionist. Thus McLaren's calling him a "French pharmacist" was meant pejoratively.

¹³*Ibid.*

paper, McLaren found Sebrell to be supportive but Autret and Scrimshaw "attacked the thing; 'how are you going to solve the problem?'" they asked.¹⁴ McLaren lamented that this congress was one of the few public opportunities he had to respond to their complaints. Following the congress, he and Autret briefly corresponded on protein issues, and their letters suggest that they quickly hit ideological barriers. Autret outlined FAO's substantial stake in protein for McLaren and assured him that FAO would attempt to reverse the trend toward ready-made protein mixtures. Autret further highlighted the paramount importance given protein by the Nutrition Division.¹⁵ McLaren aggressively, though nevertheless cordially, replied:

Marasmus is the main nutritional problem of early childhood; its causes are however basically not nutritional but cultural, economic, and hygienic. If this is so, then it knocks the bottom out of the whole argument for Protein-Rich foods etc...Repeatedly throughout all the documents you have sent me, all those produced at the Hamburg congress and almost every one ever on the subject the assumption is made that protein malnutrition is the main problem and that food mixtures are the way to prevent it...I am not, of course suggesting that it is FAO's job to get these facts straight, but I believe that FAO can look to WHO for the answer.¹⁶

McLaren's and Autret's viewpoints were irreconcilable between them and, on a greater scale, within the international nutritional community. Not long after the Hamburg Congress, McLaren found himself "ostracized" by the protein advocates. He was not surprised by his alienation because, in his view, the most powerful people in nutrition at the time were "Scrimshaw and his minions. [And Scrimshaw] was so powerful...I would say there was not anyone else [in the nutrition field] that mattered."¹⁷ In McLaren's mind, the whole problem of focusing on kwashiorkor and protein was rooted in history. When Brock and Autret wrote their monograph on kwashiorkor in Africa, they overlooked marasmus because a "skinny baby is just not that interesting."¹⁸ McLaren believed that "Doctors are always fascinated by the exotic; describe a new syndrome and put your name on it."¹⁹

¹⁴Ibid.

¹⁵M. Autret, letter to McLaren, 7 September 1966, FAO Archives, Nutrition Division Registry Files, NU-1/2, NU-1/4, box 12.

¹⁶D. S. McLaren, letter to Autret, 22 October 1966, FAO Archives, Nutrition Division Registry Files, NU-1/2, NU-1/4, box 12.

¹⁷D. S. McLaren, interview, 6 October 1995.

¹⁸Ibid.

¹⁹Ibid.

While McLaren assailed the tunnel vision with which most nutritionists conceived of nutritional problems, the idea that nutritionists had strayed too far from their central focus was contained in little nutritional dialogue during the late-1960s. J. C. Waterlow, arguably the first person to emphasize the clinical differences between marasmus and kwashiorkor, was mildly distressed over the attention nutritionists were giving kwashiorkor. Waterlow explained the problem for the researcher in the following terms: "If an investigation is made of 'kwashiorkor' in which the criterion of the disease is the presence of oedema, the undernourished [marasmic] child who had oedema last week, or may have it next week, or who has an excess of body water without clinical oedema, is ignored; yet such cases are not irrelevant."²⁰ Waterlow, often a prime protein proponent, ideologically sided with McLaren on this issue and remarked that dogmatic attitudes had led to neglect of marasmic patients and to what he termed, "logical absurdities". Waterlow recounted: "I have seen clinicians arguing about the diagnosis of a malnourished child, and settling for marasmus...[then] a small patch of dermatosis was observed and so the diagnosis was changed to kwashiorkor."²¹ In the small, exclusive world of nutritionists, Waterlow had a few friends who shared his criticisms.

William Darby, the former PAG chairman and a leading advocate for nutritionists, while speaking of nutrition and clinical medicine admitted that "the nutritionist sometimes has failed adequately to consider the relevant known medical facts, some of which are obvious to the experienced clinician, and thereby has drawn wrong conclusions or misinterpreted his observations."²² He further warned that "The nutrition scientist is in danger of becoming superficial, uncritical, and unsound in research" while trying to become an expert in other fields such as public health, food production, and population.²³ Nutritionists, Darby believed, could only rarely establish expertise in a field outside of their own.²⁴ If Darby's observations on nutritionists were accurate, then McLaren's call for a broadening of nutritionists' scope would have been seen as blasphemous to the hard-core protein nutritionists who wished to focus their specialized field further. Just short of hypocrisy the nutritionists appeared perfectly capable of simultaneously holding several diametrically opposed opinions of what nutrition should entail. Darby, for example, rallied against the trend of nutritionists to

²⁰J. C. Waterlow, 'The adaptation of protein metabolism to low protein intakes', in R. A. McCance and Elsie M. Widdowson (eds), *Calorie Deficiencies and Protein Deficiencies, Proceedings of a Colloquium held in Cambridge April 1967*, London, J. & A. Churchill Ltd., 1968, 61-73, on p. 61.

²¹Ibid. Dermatoses and oedema were considered iron-clad characteristics of kwashiorkor.

²²Darby, op. cit., note 1 above, p. 3.

²³Ibid.

²⁴Ibid., pp. 3-4.

over-expand their field, but also warned that nutritionists were too often simplifying nutrition problems and searching for "the single factor responsible for an effect" when other factors such as infection had to be considered. (emphasis his)²⁵ Because of the variety of ideas nutritionists had about what nutritionists did, it could be asserted that there were no specific camps of nutritionists. On the contrary, Darby envisaged identifiable nutritional cadres as follows:

there are those who urge that all effort be directed toward applying existing substantial knowledge toward developmental research to produce food formulations. Other scientists disdain any research developmental in nature and withdraw further and further into the laboratory to be concerned with the esoteric or at times trivial refinements of knowledge. Still others insist upon more and more restudy of well understood phenomena or situations to points of no return, while others needlessly expend resources on refinements of methodology unjustified by the application to be made of the particular procedure. (emphasis his)²⁶

At least among the nutritionists, several genres of approach existed which ranged from those advocating research, to those focused on practical programmes. These divergent perspectives caused the more prominent nutritionists to reinforce their call for competence and homogeneity within the nutritional establishment. To Darby, the ultimate aim of the nutritionists should be to conduct research, since only it could stimulate a proper evolution of nutritional knowledge and, among other attributes, the creation of "effective programs of applied nutrition."²⁷

For McLaren, effective programmes in nutrition were rarely encountered. He highlighted and condemned the strictly nutritional approach that had been adopted by health projects and instead promoted supplementary food programmes alongside programmes to prevent and control infection. McLaren declared:

The mistake has been repeatedly made in the past and is still being made of assuming that nutritional disease must be combated by nutritional measures. This is naturally not a popular thing to say among nutritionists, especially those committed to such an approach. Today the malnutrition of early childhood as typified by marasmus is symptomatic of a sick and bewildered segment of urbanising and

²⁵Ibid., p. 4.

²⁶Ibid.

²⁷Ibid., p. 5.

modernising society, rootless and insecure. **The whole society is the patient.** (emphasis mine)²⁸

In McLaren's mind, malnutrition and hunger were inextricably tied to socio-economic conditions and could not be effectively treated by singular methods alone. Given the rise in bottle-feeding in developing countries and the dearth of broad-spectrum nutritional programmes, McLaren made the following prognosis:

the future is fraught with danger and at present we are ill-prepared to meet it. Marasmus is already underestimated, and all the indications are that it is rapidly on the increase as an epiphenomenon of the half-assimilated modernising process engulfing the developing regions of the world. On the other hand, kwashiorkor, under the same influences, is dying out, being part and parcel of a more traditional way of life.²⁹

Although some nutritionists like Scrimshaw felt that McLaren had exaggerated the situation based on data only from Lebanon, McLaren's arguments were not utterly rejected. On the other hand, they were not acted on either. As long as the nutrition establishment allowed protein to remain on centre stage, harrowing messages about calories were ignored.

Nutrition and Infection Revisited

Echoing the recent research on interactions of infection and nutrition, McLaren in his *Lancet* article posited that "purely nutritional measures" such as protein mixtures were "doomed to failure" unless the causes of abrupt weaning were addressed as well.³⁰ Observations in Beirut suggested that mothers halted weaning quickly due to another pregnancy or infections. The mothers then provided diluted formula to the infants, who would subsequently fall ill with gastro-intestinal infections. In McLaren's view, the replacement of nutritious food at times of intestinal distress with teas and waters to help rest the gut were a major factor in the aetiology of marasmus.³¹ The mistaken notion that the gut required time to recover from infection remained prevalent in traditional societies as well as in Western medicine. In the case of choleric infection, for example, it was not until 1968 that scientists working in Dhaka,

²⁸McLaren, op. cit., note 7 above, p. 488.

²⁹Ibid.

³⁰Ibid., p. 486.

³¹Ibid.

Bangladesh realized that even critically ill cholera patients could successfully absorb fluid and food taken by mouth.³² Research on electrolyte physiology, malnutrition and infection became increasingly popular during the late-1960s.³³ The ideas about the interactions of infection and nutrition, which Scrimshaw, Taylor, and Gordon had first highlighted roughly a decade earlier, began to be injected into the framework of research programmes. However, their views were by no means ubiquitous. An FAO/WHO Expert Committee on Nutrition noted in 1967: "that the interrelationship of malnutrition and infection constitutes a major public health problem is slowly becoming apparent." (emphasis mine)³⁴

Studies that investigated the aetiology of diarrhoea, however, were increasingly vocal about the role of malnutrition in this disease.³⁵ Contemporary research suggested that often in kwashiorkor and marasmus, loose stools led to dehydration and death in a large percentage of cases. Although in many of these cases the diarrhoea was a symptom of an underlying nutritional disorder, its clinical importance as a principal cause of death attracted the attention of medical doctors.³⁶ Interest in diarrhoea rose high enough for an expert committee to call it "The single most important health problem in most developing countries".³⁷ Soon after this declaration, Scrimshaw, Gordon, and Taylor published a more detailed study of the interactions of nutrition and infection in the form of a WHO monograph in 1968. The advances over their publication from a decade before were substantial and brought increased attention to the topic as well as to diarrhoea. Among their important findings were key insights into the roles of infection and nutrition in the daily lives of children in developing countries. They noted that an episode of infection with recovery was usually not of great significance for a child's health. If the child had an inadequate diet and was struck by another infection, however, then just one episode of diarrhoea or an acute respiratory infection could precipitate kwashiorkor. This

³²For a detailed description of the evolution of cholera and diarrhoeal treatment in the 1960s see: Joshua Ruxin, 'Magic bullet: the history of oral rehydration therapy', *Medical History*, 38, pp. 363-97.

³³For example, see: F. Lowenstein, 'Nutrition and infection in Africa', Joint FAO/WHO/OAU Regional food and nutrition commission for Africa, Occasional Paper No.2, October 1967, LSHTM Archives, WHO policy file.

³⁴Joint FAO/WHO Expert Committee on Nutrition, op. cit., note 5 above, p. 22.

³⁵See, for example: Lie Kian Joe, B. Rukmono, Sri Oemijati, K. Sahab, K. W. Newell, Sie Ting Hay, and R. Widodo Talogo, 'Diarrhoea among infants in a crowded area of Djakarta, Indonesia', *Bulletin of the World Health Organization*, 1966, 34, pp. 197-210.

³⁶For a superb public health perspective on the interactions of malnutrition and diarrhoea see: D. B. Jelliffe, 'Therapy of diarrheal disease in early childhood, principles based on observations in the tropics', *Clinical Pediatrics*, June 1967, 6(6), pp. 355-64.

³⁷Joint FAO/WHO Expert Committee on Nutrition, op. cit., note 5 above, p. 73.

schematic for understanding the course of kwashiorkor was a crucial reply to critics who had argued that much of the time, diarrhoea did not spur kwashiorkor.³⁸

1969 marked the year that Scrimshaw, Gordon, Béhar, and their fellow INCAP investigator, Miguel Guzmán, published their final commentary on their three-village nutrition and infection study, discussed in the last chapter. In the final analysis, the researchers noted that their monumental study had enriched knowledge but had not provided any singular insights. In their words: "Although new and useful procedures for public health action became evident, the principles established decades ago remained unchanged."³⁹ Nevertheless, the study did present exceptional new data on morbidity in young children which demonstrated uniquely the toll of malnutrition and infection during childhood. Moreover, having observed that preventive medicine or supplemental feeding had only a limited impact on childhood health, the researchers noted that malnutrition and infection should be considered a single entity since their treatment together was found to be far greater than the sum of their parts.

The three-village study was the precursor to perhaps the most impressive research that was being done during the late-1960s to show the inter-relationship between nutrition and infection. Starting in 1964, Dr. Leonardo Mata, a nutritionist at INCAP who had been involved in Scrimshaw's earlier work on interactions of nutrition and infection, expanded on the completed three-village study with an eye toward the role of diarrhoea. In the Guatemalan highland village of Santa María Cauqué, Mata and his colleagues were tracking children from birth until the age of three to determine with greater precision the relation between nutrition and infection. Additionally, they were recording important observations of feeding practices, intestinal infection, disease incidence, and childhood growth and development. Their findings did much to confirm past observations that growth stunting tended to be brought on during the weaning period at which time infections also began. They also added new data which showed the synergistic manner in which malnutrition was related to diarrhoea as well as to other diseases such as measles, pertussis, and pneumonia. According to Béhar, who had replaced Scrimshaw as the director of INCAP, Mata's research was reshaping the goal of nutritional research. The elusive "endgame" they sought, stated Béhar, was to find a diet culturally and economically compatible with rural life which helped

³⁸Nevin S. Scrimshaw, interview, 25 July 1995 and N. S. Scrimshaw, C. E. Taylor, and J. E. Gordon, *Interactions of nutrition and infection*, Geneva, WHO, Monograph series no. 57, 1968.

³⁹Nevin S. Scrimshaw, Moisés Béhar, Miguel A. Guzmán, and John E. Gordon, 'Nutrition and infection field study in Guatemalan villages, 1959-1964: IX. an evaluation of medical, social, and public health benefits, with suggestions for future field study', *Archives of Environmental Health*, January 1969, 18, 51-62, on p. 53.

prevent childhood disease. INCAP data had demonstrated that in the cases of these diseases mortality and morbidity rates were several times what had been observed in industrialized countries.⁴⁰ Although diet was the target of their work, as late as 1969, they were still unable to state with certainty which factor was "primordial" in the development of clinical malnutrition.⁴¹

Urban Nutrition

A good deal of McLaren's concerns for the rise of marasmus in the world grew out of his belief that urbanization, then progressing at a rapid pace, would lead to new and potentially wider nutritional deficiencies. McLaren was not the first to bring up this issue; since applied nutrition programming began, nutrition planners had expressed concern that their projects were only targeting rural populations at a time of enormous movement from these areas to the cities. Further, the usefulness of applied nutrition for urban dwellers came into question since there was not much point in teaching an urban slum dweller how to construct a household garden when there was no land on which to put it. Increasing knowledge of the tremendous demographic shift toward the cities slowly came to influence organizational thought on nutrition in developing countries. Whereas previously, nutrition programmes had primarily targeted agriculturists -- recipients were often referred to as subsistence farmers -- new programmes had to revise these terms to include urban populations. The late-1960s appears to mark the birth of substantial new efforts on this issue. Teply, then Unicef's nutrition expert at headquarters, in a letter to Heyward in 1967 summed up the new programmatic problems inspired by the urban transition: "many have talked about malnutrition in urbanized areas of developing countries, but few have developed specific nutrition projects for these areas. Indeed, there are some who believe specific nutrition projects are neither necessary nor desirable." (emphasis his)⁴² According to Teply, Unicef had been engaged in a number of programmes such as supplementary foods, health service, and milk conservation, that had had some effect on urban nutrition but which were apparently not reaching the shanty towns and other needy areas. Unicef staff felt that the two options for effective programmes in the cities were

⁴⁰Leonardo J. Mata and Moisés Béhar, 'Public health significance of nutrition and infection: interaction in preindustrial countries 1,2', paper presented at the International Congresses of Tropical Medicine and Malaria, Teheran, September 1968, LSHTM Archives, nutrition and infection folder, p. 20. A fuller description of the results of Mata's work follows in Chapter VIII.

⁴¹Ibid., p. 3.

⁴²L. J. Teply, letter to E. J. R. Heyward, 12 July 1967, Unicef Archives, 88R025, Box T-006, Teply Files.

to have either a new line of projects distinct from ANPs or to modify and expand applied nutrition programming. Teply asserted that nutrition rehabilitation centres, university involvement, and possibly the fortification of staple foods were among the methods that should be promoted. However, he generally favoured single projects that crossed urban-rural lines over projects linked to one population group. Apparently, his opinion did not carry far with the Unicef Board since rural projects were increasingly viewed in a different context from urban endeavours.⁴³

Many nutritionists brooded over the problem of urbanization, noting that their methods would have to be redesigned in order to address a host of new nutritional problems. Jelliffe, one of the most prominent tropical nutritionists, noted that the rising levels of urbanization combined with "the cultural dislocation and uncertainty [sic] of uprooted new townsmen again has most impact on young children-notably with the trend to unaffordable bottle-feeding (considerably under the impetus of locally inappropriate and unethical advertising)".⁴⁴ For Jelliffe and his colleagues, urbanization was certain to bring the problems of the major childhood health issues -- diarrhoea, malnutrition, and respiratory infection -- in from the countryside. Teply remarked that "Little is known about how this trend [early breastfeeding cessation due to urbanization] might be slowed and there appear to be only limited attempts in developing countries in this regard."⁴⁵ FAO and WHO began to pursue urban and peri-urban nutritional problems seriously during this time period. Progress was slow, and midway through 1968 FAO, WHO, and Unicef planned to "find out what persons or institutions are available in strategic areas to undertake feasibility studies for programmes aimed at improvement of nutrition within the urban setting."⁴⁶ Thus, as the process of urbanization was accelerating, most project proposals and nutrition studies still tended to conjure the image of the aid recipient as a rural dweller.

What Is It All About?

While the nutritionists witnessed growth in infighting during the late-1960s, they were joined by their fellow nutrition programme administrators who were also

⁴³See: 'General Progress Report of the Executive Director, child malnutrition in the developing countries', 17 March 1969, E/ICEF/586/Add.9.

⁴⁴Derrick B. Jelliffe, 'The pre-school child as a bio-cultural transitional', *The Journal of Tropical Medicine*, December 1968, 217-27, on p. 219.

⁴⁵L. J. Teply, 'Protein and calorie needs of the young child and alternative ways to meet them', paper for the Food Conservation Conference, 13-22 May 1968, Unicef Archives, Teply files, C242, p. 5.

⁴⁶'Report of FAO/WHO Inter-Secretariat Meeting on Nutrition Problems of Urban and Peri-Urban Areas', Geneva, 27-31 May 1968, WHO Archives, folder 2, box A.0918, p. 8.

having trouble defining their roles. J. P. Greaves, a British-educated nutritionist working for FAO during this time, found his initial work to be entirely disillusioning. His first task at FAO, which brought him in close contact with McLaren at the American University of Beirut, was to organize a multi-disciplinary course on nutrition for influential policy makers in the Middle East. After travelling extensively to drum up participation, Greaves returned to Cairo to brief the head of the FAO office, who also happened to serve as the regional FAO director. Greaves' first conversation with the director crushed his excitement for the project: "the only thing that interested him [the regional director] was where would he be sitting on the platform [at the initial ceremony]...I tried to express in my eyes total contempt...I do realize that I was over naïve; these things are not beyond relevance".⁴⁷ Soon after, Greaves began to feel that the agency invested too much time in organizing superfluous nutrition meetings and training seminars. He recalled the epiphany he had when he was still a young nutrition officer preparing for one such meeting:

I was sitting in the Roman amphitheatre in Amman and it suddenly came to me [that] all this talk -- it's really not what it's about -- and I can remember saying [to myself] 'some people talk about seminars as if something had been achieved, when in fact nothing has been achieved except the potential to do something. But it's the follow up; nothing has happened unless people go out and operate.'⁴⁸

Greaves' perceptions of FAO uncannily mirrored FAO's own evaluation of its nutrition training programmes which came several years later. On all counts, according to evaluator Jean McNaughton, a senior FAO food policy and nutrition officer, nutrition worker training had failed. The research fellowship programme, for example, which trained students from developing countries in nutrition, failed to teach culturally adapted lessons. More detrimentally, the students, once trained, often failed to return to their native lands. McNaughton called the training of field-level nutrition workers - the same work Greaves conducted -- "the weakest link in the chain of training activities" and demurred that training had "tended to be too theoretical, that trainees have no clear understanding of nutrition information, [and] that in addition they have

⁴⁷J. P. Greaves, interview, 8 December 1995. Greaves' disgust for FAO continued to mount after similar incidents. At an FAO reception one evening, he felt nauseated after hearing his colleagues discuss incessantly their perks and pensions.

⁴⁸Ibid.

not received sufficient instruction in what to teach and how to teach".⁴⁹ The nutrition training problems also applied to regional seminars and workshops of the sort Greaves organized which, according to McNaughton, "have not made a large contribution to strengthening national institutions or training capacity."⁵⁰

For Greaves, FAO would never be an organization where he felt that he could grow. A few years after joining, he decided to devote his talents to Unicef which, according to him, was "a congenial organization...concerned to see things happen".⁵¹ Greaves' decision to pursue Unicef over FAO reflected the deeper rifts in the application of nutritional knowledge that he had observed first hand. Like many of his peers, Greaves was anxious to affect nutritional problems discernibly. In the nutritional community, the perception that Unicef was the centre for such action had become popular. On a macro level, Unicef certainly was experiencing dramatic growth as well as change in its outlook. In 1966 the Executive Board met for the first time in Africa, where Unicef then had programmes in forty-one countries, its largest continental contingency. Its total annual income in that year reached \$35.2 million and the Board planned to nearly double that amount by the end of the decade.⁵² During the late-1960s, Unicef continued to direct its central nutrition efforts through ANPs, while also working with the World Food Programme (WFP) on feeding programmes for children and protein-rich food development.⁵³ Progress during the decade revealed that the WFP had done much to improve Unicef's focus on programmes for children, rather than simply feeding projects. At an internal meeting with Labouisse, Unicef emphasized that it "should not compete with the World Food Program" but should co-operate.⁵⁴ Unicef administrators, insofar as they were concerned with food supplies, saw Unicef as an "executing agency" for the food supplies WFP provided. Thus their vision of Unicef as an aid agency had changed demonstrably.

⁴⁹Jean W. McNaughton, 'A review of FAO's activities in nutrition education and training 1949-1977', paper presented at International Conference on Nutrition Education, Oxford, 31 August-7 September 1977, Unicef Archives, PR-NU-002, p. 5.

⁵⁰*Ibid.*

⁵¹J. P. Greaves, interview, 8 December 1995.

⁵²'Milestones in Unicef's History 1946-1985', January 1986, Unicef Archives, PR-NU-001, p. 4.

⁵³'General approaches including food and nutrition policy', 1973, New York, Unicef, Unicef Archives, CF-NYHQ-05ANS-005, p. 73. See also: 'Statement of the Executive Board', June 1968, E/ICEF/576, paragraphs 56 and 63; 'Statement of the Executive Board', June 1965, E/ICEF/528, paragraph 170 and annex II; 'Statement of the Executive Board', June 1965, E/ICEF/528/Rev.1, paragraphs 183-184, 188, annexes III and IV; 'Statement of the Executive Board', June 1967, E/ICEF/563, paragraphs 86, 90-93.

⁵⁴B. H. Fraser, note to H. R. Labouisse, 1 September 1965, UN Archives, CF-NYHQ-09.E (64-80), folder G0013.

Out of its programmatic shifts, Unicef continued harping on its "country approach" and sought to redirect individual projects toward more holistic services integrated into national development plans. This shift for Unicef resonated through its projects country-by-country as administrators encouraged creativity in programmatic formulation.⁵⁵ In the words of Unicef's Executive Director, Henry Labouisse, the characteristics of future Unicef programmes should reflect "greater flexibility, ingenuity, and exploration of unconventional methods."⁵⁶ At a time when FAO and WHO were pointing out which type of experts should be brought together to solve hunger problems, Unicef was designing a framework for which **services** had to be united to solve these problems. In much the same way that a child's health depended on a variety of factors, Unicef's administrators asserted that programmes should draw on a "whole child approach" which called for the integration of the various ministries involved in the well-being of children.⁵⁷ As the decade drew to a close, Unicef increasingly discussed tangible applications for national nutrition planning.⁵⁸ WHO and FAO, too, wished to push nutritional issues onto national agendas but continued to encounter obstacles. Dr. Ken Bailey, then the WHO Regional Adviser for Nutrition in the Western Pacific, worked fervently for inter-ministerial interest in nutrition but often found the task overwhelming. According to him, in the late-1960s: "There was a recognition at the level of national planning level that nutrition needed a coordinated approach, that was usually agreed. The frustration was these inter-sectoral committees would send lower and lower level people who would check back with their ministry and not get anything done."⁵⁹

FAO maintained its substantial commitments to the WFP and FFHC through the end of the decade. WFP continued to explore new methods for linking local food production to its food supplementation projects, and further, it attempted to link itself more closely to national development plans.⁶⁰ The FFHC, which had thrived under Sen, found itself struggling under A. H. Boerma, who became the Director-General in 1968. In the opinion of Charles Weitz, the co-ordinator of the FFHC, the campaign

⁵⁵'Milestones in Unicef's History 1946-1985', op. cit., note 52 above, p. 5.

⁵⁶Henry R. Labouisse, 'Strategy for Unicef programme cooperation', December 1968, in John Charnow and Sherwood G. Moe (eds), *Henry R. Labouisse, Unicef Executive Director, 1965-1979*, New York, Unicef, 1988, CF/HIST/MON/88-011, p. 24.

⁵⁷Ibid., p. 23.

⁵⁸'General approaches including food and nutrition policy', op. cit., note 53 above, p. 74. See also: 'Statement of the Executive Board', June 1968, E/ICEF/576, paragraphs 56 and 63 and 'Statement of the Executive Board', May 1969, E/ICEF/590, paragraphs 75-77.

⁵⁹Ken Bailey, interview, 1 April 1996.

⁶⁰*Report of the Thirteenth Session of the Conference, 20 November - 9 December 1965*, Rome, FAO, 1966, pp. 22, 25-27.

had done much to educate governments and the public about the precarious balance between global population growth and agricultural productivity. Weitz, however, did not count any nutritional ventures as among the FFHC's top accomplishments.⁶¹ FAO also experienced a degree of change during the late-1960s, though it is difficult to identify in concrete terms. According to an evaluation of FAO's nutrition programmes, FAO nutrition staff were becoming aware that "agriculturists, nutritionists, and food economists needed to collaborate closely in formulating programmes and policies to eradicate hunger."⁶² This type of ideological development is one of the many themes which run through this history of nutritional policy.

One theme prominent on the policy front was that every few years administrators and policy makers announced, at times in collusion with scientific developments, new or reinvented plans for truly impacting hunger and malnutrition in developing countries. They seemed to realize, from time to time, the ingredient that had apparently been missing from their policies and programmes which would, in fact, eliminate hunger and malnutrition. During the 1950s what was missing was often identified in scientific terms such as protein mixes or food supplementation. In the 1960s the focus became more ideologically driven: increased attention to the pre-school child and the insertion of nutrition concerns into national development plans were popular notions. After Unicef's conference at Bellagio, FAO and WHO frequently spoke of the co-ordination of various types of nutrition and nutrition-related experts in nutritional planning. But for many nutritionists, planning would hardly be the golden key to solving persistent nutritional problems. Jelliffe cynically commented that it was an "unequivocal fact that not all the health problems of pre-school children (or any other age-group) can be attacked immediately. This is so anywhere in the world, especially in less well-to-do areas with large problems and the so-called 'shortage syndrome' - that is with insufficient staff, money, equipment and everything else."⁶³ While administrators dreamily discussed how the next project could really have impact and influence nutritional change in an entire country, or even across a region, nutritionists like Jelliffe had a much cooler view of the situation. Jelliffe often

⁶¹Charles H. Weitz, letter to Boerma, 5 January 1968, FAO Archives, FFHC registry file, 13/4. WHO's Nutrition Section had little regard for the FFHC. After being invited to provide a representative at the FAO Third Freedom From Hunger Conference, Bengoa, the head of WHO's Nutrition Unit, informed his director that "We have learned from past experience that these meetings are not of very great interest to WHO." As a result, WHO was usually unrepresented at FFHC activities. J. M. Bengoa, letter to Dr. Karefa-Smart, 15 September 1967, WHO Archives, FAO FFHC, box A.0944 and WHO Director-General, letter to FAO Director-General, 30 September 1969, WHO Archives, FAO FFHC, box A.0944.

⁶²McNaughton, *op. cit.*, note 49 above, p. 4.

⁶³Jelliffe, *op. cit.*, note 44 above, p. 223.

stressed how health programmes had to balance priorities: if the admission of one chronically ill child resulted in neglecting ten easily-treated dehydrated children, then a preference would have to be shown.⁶⁴ These were issues that policy makers, perhaps blinded by a combination of their idealism and sense of power, wished to leave to the field workers. In a world of scarce resources, the workers in the field were constantly balancing ethical considerations with the magnitude of the nutrition problems they faced. Invariably, some sick children would receive treatment and live, while many others, who if given treatment might be saved, would die.

Applied Nutrition Programming

If the first half of the decade can be said to have seen the germination of applied nutrition programmes, then it might be said that the second half was spent searching for the intangible fruit. While the ANPs of the early-1960s were, according to one group of experts, administered by "specialists having no previous experience themselves in work of this kind and often with little knowledge about experience gained elsewhere", during the late-1960s these specialists could apply their experience.⁶⁵ According to inter-agency evaluators in 1965, efforts to share experience in ANPs throughout the developing world and increase the quantity and quality of staff had "not yet come to full fruition."⁶⁶ While the first nutrition projects based in rural communities had sought solely to encourage production and consumption of nutritious foods, later projects began to contextualize the projects in more economic terms. Issues of microeconomic development -- purchasing power, exchange of currency, markets for products -- as well as inter-ministerial co-operation increasingly informed the character of ANPs.⁶⁷

Much of FAO's focus on applied nutrition remained educational. Its publication of a second edition of Jean Ritchie's influential 1950 pamphlet, *Teaching Better Nutrition*, revealed much about the transformation that had occurred in attitudes toward hunger. Ritchie, a nutrition educator based at the LSHTM, noted that educational research for ANPs "does not seem to have progressed very far".⁶⁸

⁶⁴Ibid.

⁶⁵*Report of the Joint FAO/WHO Technical Meeting on Methods of Planning and Evaluation in Applied Nutrition Programs, Rome, 11-16 January 1965*, Rome, FAO, FAO Nutrition Meetings Report Series no. 39, 1966, p. 10.

⁶⁶Ibid.

⁶⁷Ibid., pp. 12, 51-3.

⁶⁸Jean A. S. Ritchie, *Learning Better Nutrition - a second study of approaches and techniques*, Rome, FAO, FAO Nutritional Studies no. 20, 1967, p. 2.

Exacerbating the lack of advanced teaching knowledge, Ritchie felt, was the failure of agencies and governments to engage comprehensive evaluation programmes.⁶⁹ The major changes during the previous decade and a half that she identified were a shift from dogmatic teaching to active learning and the embrace of many different professionals -- food technologists, social workers, economists -- into the development fold.⁷⁰ Ritchie's low esteem for the progress of education in applied nutrition was one of many signs that ANPs were failing.

FAO, Unicef, and ANPs

In January 1966, Unicef's strong-minded Deputy Executive-Director of programming, D. B. Sinclair, wrote an unusually acerbic letter to the Deputy Directors-General of WHO and FAO. The letter is worth quoting in large part because it provides unusual insight into the enmity between the agencies and since such strong feelings were rarely committed to paper. Sinclair wrote that "Unicef has for some time been concerned about the difficulties which exist in the FAO/WHO relationships in the field of nutrition which are making it increasingly difficult in a number of cases to arrive at any satisfactory development of jointly-assisted projects."⁷¹ When WHO arranged for nutrition projects in the Western Pacific region and invited Unicef to participate, FAO would ask to be included and WHO would decline. Reversed scenarios were commonplace. This disagreement between the agencies had, in Sinclair's opinion, been detrimental to their joint undertakings: "There is ample evidence that governments do not wish to be involved in projects which are subject to jurisdictional wrangles, and that the UN image is not improved by them."⁷² Perhaps more than other agencies, Unicef insisted on maintaining a shining image world-wide, because of its large contingent of staff based in developing countries and its historical broad base of support. Although this particular occasion might be identified as an exception in inter-agency relations, Sinclair's words suggest that the contrary is true. She angrily noted, "While we are raising this issue in connection with certain specific projects, I would like to make it clear that this is not an isolated instance and that there have been other occasions on which initiatives taken by FAO

⁶⁹Ibid., p. 2.

⁷⁰Ibid., p. 3.

⁷¹D. B. Sinclair, letter to O. V. Wells, New York, 21 January 1966, UN Archives, CF-NYHQ-09.E (64-80), folder G0013. See also: D. B. Sinclair, letter to Dorolle, 21 January 1966, WHO Archives, folder 1, box A.0918.

⁷²Ibid.

have not included WHO to the extent that the latter agency believed was appropriate."⁷³ Sinclair further claimed that the haggling between FAO and WHO and delays promulgated by the tempestuous situation had resulted in the exceedingly low level of Unicef assistance to nutrition (\$2.7 million) in 1965. That figure was nearly half of the average amount allocated to these projects during the previous years.⁷⁴

Although Sinclair insisted that Unicef was concerned about the amount of aid going to nutrition programmes, she nevertheless threatened the nutrition sections of both agencies: "Increasing requests in other fields [besides nutrition] are more than sufficient to absorb Unicef's limited resources, and if agreement is difficult to reach on nutrition requests, allocations will inevitably be directed elsewhere."⁷⁵ A short piece of extremely confidential correspondence between WHO's Chief Medical adviser at Unicef and the Assistant WHO Director-General, suggests that Sinclair's anger toward WHO and FAO was not meant to be received equally. WHO's adviser cautiously wrote:

The question of FAO or WHO/FAO relations in the field of nutrition has, as you know, been the subject of repeated discussions both here and at Headquarters, and of correspondence between New York and Geneva. For your personal information, while - as it was discreetly pointed out to me - WHO is not blamed for most of the difficulties referred to in Mrs. Sinclair's letter, identical letters had to be forwarded to both agencies.⁷⁶

However the Sinclair letter was intended, WHO and FAO decided to work together to clarify their positions. In Rome in February, WHO and FAO representatives including the head of the Nutrition Section, José María Bengoa, and Autret, the director of the Nutrition Division, twice met to discuss inter-agency relations on nutrition.⁷⁷ The

⁷³Ibid.

⁷⁴Burhan Ilercil, 'Unicef Program Statistics, 1947-1979', November 1985, New York, Unicef Archives, CF/HIST/IC-85-3. See also: Unicef Executive Board reports, 1948-1965, and L. J. Teply, 'Unicef activities relating to meeting protein needs', 15 March 1968, Unicef Archives, Teply file, PR-NU-001.

⁷⁵D. B. Sinclair, op. cit., note 71 above.

⁷⁶S. Flache, letter to L. Bernard, 25 January 1966, WHO Archives, folder 1, box A.0918.

⁷⁷Bengoa, a Venezuelan, had become the chief of WHO's Nutrition Section in 1964. Much of his popularity had stemmed from his advocacy of nutrition rehabilitation centres for children. As early as 1955 he had recommended that these centres be established to offer the care children suffering from PCM needed and to do so at a substantially lower cost than hospitals. These centres not only helped children recuperate, but also trained mothers in vital nutritional lessons to avoid recurrence. The centres especially flourished in Latin America. See: *A Practical Guide to Combating Malnutrition in the Preschool Child*, New York, Research corporation, 1970, pp. 4-6.

representatives rehashed their respective responsibilities and agreed to ground rules which essentially called for mutual inclusiveness on any project undertaken in the nutritional field. The internal document they produced does little to illuminate the degree of conflict that existed; it only fatuously mentioned that "there were a number of areas of activity in which co-ordination was necessary and in which difficulties had arisen in the past."⁷⁸ Unicef was given little attention in the proceedings except for a call for establishing a more rapid process for agency technical approval of Unicef-funded projects.⁷⁹ In contrast to the calm tone of the documentation, Bengoa claims that 1966 marked a year when FAO/WHO relations reached "crisis" proportions which necessitated the establishment of "rules of the game."⁸⁰ In retrospect he believes the conflict was infantile and unnecessary. According to him, he deserved a share of the blame for the conflict since he and Autret "were defending our points of view with excessive force and maybe we did not know how to be flexible as would have been desirable."⁸¹ At the heart of at least some of the problems, therefore, were WHO and FAO institutional egos. A later meeting on the subject of co-ordination implied that the main problem had been that on occasion, one agency or the other had initiated and conducted nutrition projects "without consultation with the other".⁸²

After the FAO/WHO administrative meeting in February to flesh out their differences, Oris Wells, FAO's Deputy Director-General, responded to Sinclair's concerns. Wells was particularly irked that Unicef would attribute lower nutrition allocations to FAO/WHO tangles and commented that "the two agencies cannot agree that lack of agreement between them" was a factor.⁸³ Wells asserted that allocations

⁷⁸'Report of an FAO/WHO intersecretariat meeting to discuss interagency co-operation in the field of food and nutrition', Rome, 21-24 February 1966, Bengoa personal collection, p. 60 also found at WHO Archives, folder 2, box A.0918.

⁷⁹Ibid., p. 63.

⁸⁰I have translated Bengoa's remarks from Spanish. José María Bengoa, personal correspondence, 14 March 1966. In WHO correspondence from the time, Bengoa noted that the immediate cause of Sinclair's inflammation -- co-ordination problems in Cambodia and Malaysia -- were "no more than symptoms of the present tension." J. M. Bengoa, letter to Bernard, 7 February 1966, WHO Archives, folder 1, box A.0918. See also: 'Minutes of the FAO/WHO meeting held on Thursday 4 February 1965 at WHO Headquarters, Geneva', 1965, WHO Archives, jacket 1, box. A.0918; 'FAO comments on the minutes of the FAO/WHO meeting held on 4-5 February 1965 at WHO Headquarters, Geneva', 1965, WHO Archives, jacket 1, box. A.0918.

⁸¹José María Bengoa, personal correspondence, 14 March 1966.

⁸²'The role of WHO representatives in the joint fields of WHO-FAO responsibility', 7 November 1966, WHO Archives, folder 2, box A.0918, p. 5

⁸³Oris V. Wells, letter to Sinclair, 8 March 1966, UN Archives, CF-NYHQ-09.E (64-80), folder G0013. Wells mentioned that Autret would visit with Unicef and WHO representatives in April to smooth over any lingering concerns. Dorolle, WHO's Deputy Director-General, made essentially the same remarks a few months later. P. Dorolle, letter to Sinclair, 2 May 1966, WHO Archives, folder 2, box A.0918.

to applied nutrition had probably been reduced because of its rapid expansion and development during previous years and Unicef's activities in other fields. Nevertheless, FAO and WHO felt that their discussions had resulted in an improved format for co-operation and for appraising Unicef nutrition projects. Between FAO and Unicef, the situation also seemed to improve as Autret adopted a highly positive and constructive tone toward inter-agency relations.⁸⁴

At Unicef, administrators of ANPs had adopted a new attitude of "increased flexibility" which called for essentially a country-based approach toward individual programmes. Throughout the agency, Unicef administrators were continuing their attempts at decentralizing the execution of projects so that they might be evaluated below headquarters' level.⁸⁵ It was Unicef's hope that a diversification of ANPs on the country level would, according to Teply, enable the agency to reach more than the "minute proportion of the population in need" which current projects did.⁸⁶ Teply and others concerned with nutrition generally found applied nutrition to have had little, if any, impact. Nonetheless, Teply believed that it was agreed that Unicef had "to work at applied nutrition as we know it or something very much like it" in order to achieve results and "a real spreading effect."⁸⁷ Although it was difficult to measure nutritional improvements inspired by ANPs, Teply asserted that "there were indications of a permanent 'take' in some of the projects".⁸⁸ Overall, however, no one was able to underscore data that showed positive impact. Thus, ANPs continued to trouble Unicef administrators, not in the least part due to their ongoing concern that FAO was sometimes placing superfluous nutrition experts at the project sites in the field.

In February 1967, at what was to be the last meeting of the FAO/Unicef Joint Policy Committee, Unicef declared that it would no longer provide funds for FAO experts on ANPs. This incident was a tremendous blow to the Nutrition Division at FAO since nearly 60% of its funding for field projects had originated from Unicef.⁸⁹ Paul Lunven, an FAO nutrition administrator who served at that meeting as the

⁸⁴See: M. Autret, 'Comments on FAO/Unicef relations', 30 October 1968, FAO Nutrition Library Rome, NU: MISC/68/28 and M. Autret, 'The Nutrition Division activities in the FAO/Unicef joint programme', 1969, FAO Nutrition Library, Rome, NU: MISC/69/7.

⁸⁵Charles Egger, interview conducted by John Charnow, 11 October 1983, Unicef Archives, interview file, pp. 22-3. Egger succeeded Sinclair as Deputy Executive Director of programmes in 1967.

⁸⁶L. J. Teply, letter to E. J. R. Heyward on Assessment - Applied Nutrition, 14 June 1967, Unicef Archives, CF-NYHQ-05ANS-002 (Egger), folder D0157.

⁸⁷Ibid. For more information about FAO/Unicef relations specifically in this area see: 'Report of the Sixth Session of the FAO/Unicef Joint Policy Committee, Rome, 6-8 February 1967', 13 March 1967, E/ICEF/557*, paragraphs 20-26.

⁸⁸Teply, op. cit., note 74 above.

⁸⁹Paul Lunven, interview, 27 March 1996.

secretary, recalled how the Unicef move was welcomed by the high-level administrators at FAO. Lunven explained that other FAO divisions and departments had been envious of the Nutrition Division's essentially exclusive relationship with Unicef.⁹⁰ In the view of the FAO department heads, Unicef was paving the way for greater co-operation with FAO in other areas such as forestry, fisheries, and agriculture. Nevertheless, in the Nutrition Division Lunven perceived resentment for the move principally because its administrators believed that Unicef was meant to be only an aid agency. By closing itself off to FAO nutrition experts, it was clear that Unicef would begin recruiting its own in-house nutrition experts.⁹¹

Although it seemed that Unicef would be pleased to have greater co-operation with FAO in other fields, enthusiasm for mutual ventures in nutrition rapidly dissipated. In the summer of 1967, Dr. Michael Latham, often a consultant on FAO and WHO applied nutrition activities, wrote a brief article which encapsulated the central problems he perceived with ANPs in the UN. The difficulties governments had dealing with three UN agencies for their nutrition programmes led Latham to ask: "Is it too outrageous (or too Utopian) to ask whether all nutrition activities could not be better dealt with by a single U.N. agency?"⁹² Although there would not be one nutrition agency at the UN, Unicef wished to make its nutrition programme adequately autonomous to remedy nutrition's splintered approach. In 1968 Charles Egger, Sinclair's successor, complained that ANPs were isolated from protein-rich food efforts as well as from ongoing milk conservation programmes. While trying to establish a working group on the issue of poor agency co-ordination, Egger placed heavy blame for poor programmes and policies on FAO: "the guidance given by FAO...is at best uneven. They have certainly not been able to advise us on the major policies to be followed either on a country or a regional level based on studies carried out in the countries and/or regions concerned, and - possibly partly as a result of this - I have sensed a certain apathy and pessimism on the part of our own field staff."⁹³

⁹⁰The nutrition division was one component of the Agriculture Department of FAO. Thus, its relationship with Unicef had helped it maintain a more prominent status than many other FAO divisions.

⁹¹Paul Lunven, interview, 27 March 1996.

⁹²Michael C. Latham, 'Some observations relating to applied nutrition programs supported by the U.N. agencies', *Nutrition Reviews*, July 1967, 25(7), 193-97, on p. 196. Latham at the time was affiliated with the Harvard School of Public Health, and his critique raised some concern at WHO and FAO. See: J. M. Bengoa, letter to Director-General, 22 September 1967, WHO Archives, box A.0917.

⁹³Charles A. Egger, letter to E. J. R. Heyward on 'setting up of a working group at headquarters to review our policy in the field of food and nutrition in the various regions', 29 March 1968, Unicef Archives, CF-NYHQ-05ANS-001.

Apparently, the top Unicef administrators viewed FAO relations and guidance on nutritional issues as hopeless.

Perhaps due to the lack of positive reinforcement from its nutrition programmes to date, Unicef in 1969 again funded its nutrition programmes at a level relatively low compared to previous years. The Executive Board expressed its concern that only \$2.9 million, just 8.5% of all Unicef programme commitments, were allocated to nutrition programmes. This figure did not include some nutrition expenditures such as school nutrition education and other joint programmes.⁹⁴ Unicef had been terribly disappointed with new ANPs, many of which ironically were "not well related to national plans of development".⁹⁵ The Unicef Board found that nutrition activities in Latin America were often "isolated ventures" which were unsuccessful at forming the broad tapestry which organizational idealists had envisaged.⁹⁶ More than any nutrition crisis, Unicef was stressing the need for national planning as its nutrition projects wavered.⁹⁷

Scrimshaw believed that the fatal flaw of ANPs -- their unsustainability -- was confirmed when the projects ended and the governments did not have the means or motivation to provide the resources to extend them. According to him, ANPs were a reactionary but unrealistic approach to malnutrition in view of national resources and the ability of FAO and WHO to maintain a presence in one field.⁹⁸ Béhar agreed with Scrimshaw but carried the critique more deeply into the motives and methods of the programmes which originated from a negative reaction to food distribution programmes. Theoretically, by teaching children in school how to cultivate their own protective foods in school gardens, food supplementation could eventually be terminated. However, Béhar noted that in ANPs,

the problem was that although the food didn't come from abroad, the ideas came from abroad. In a way it was similar to food distribution in the sense that they were imported products. And the whole planning was done in Rome or Geneva and then the package came here...the design was done there. The agencies were the ones, and I was partly responsible because I was involved in telling the governments what to do and I was considering that it was right. But I was too ambitious [in

⁹⁴'Nutrition', May 1969, E/ICEF/590, paragraph 74.

⁹⁵'General Progress Report of the Executive Director', op. cit., note 43 above, p. 10.

⁹⁶Ibid.

⁹⁷Black incorrectly identified the late-1960s as the time of the emergence and popularity of the applied nutrition approach. Maggie Black, *The Children and The Nations: The Story of Unicef*, Hong Kong, UNICEF, 1986, p. 164.

⁹⁸Nevin S. Scrimshaw, interview, 26 July 1995.

Guatemala], people were not motivated...we were forcing teachers to do more work and they were resisting because there were not any additional stimuli to do it. Then, in the health centres, the health education was...too much based on foreign ideas, it was all [outside] their understanding and culture. Even the concept of three basic food groups, still, it was outside [their] understanding.⁹⁹

Béhar critiqued several ANPs that were established in Central America and often found that the projects were utterly dependent on foreign aid. The seeds planted in the gardens, the cooking implements used for food preparation, were all provided from overseas.¹⁰⁰ When funding was slashed, the programmes rapidly withered. As the decade drew to a close, ANPs seemed destined to be cut off from their foreign support and were thus left to their demise.

Malnutrition, Learning, and Behaviour

As we have seen, on the scientific frontier nutritionists were perpetually looking at new ways not only to impact malnutrition -- through improved treatments and preventive dietary regimens for example -- but also to convince the world that hunger and malnutrition deserved more attention. This trend began with the findings of the first *World Food Survey* which showed that half the population of the planet was malnourished; by highlighting this figure, FAO had hoped to rally support for broader programmatic initiatives. Soon after, scientists underlined the vicious disease of kwashiorkor as the reason for fighting malnutrition. Later, policy maker concerns meshed with scientific findings as the dialogue on nutrition and working efficiency exemplified. In this tradition, Scrimshaw in 1967 once again attracted attention to the work of nutritionists and malnutrition. Based on considerable evidence collected by nutritional researchers, he gave further credibility to the notion that, in addition to the stunted physical growth that resulted from malnutrition, brain development and intellectual growth might also be affected.

In a momentous article entitled 'Malnutrition, Learning and Behavior', published in *The American Journal of Clinical Nutrition*, Scrimshaw drew an analogy between the experimentally observed denigration of learning abilities, memory, and behavioural traits in malnourished animals, and the similarly expected results in hungry and malnourished children. Scrimshaw propounded that for children in developing

⁹⁹Moisés Béhar, interview, 29 December 1995.

¹⁰⁰Ibid.

countries, "Permanent physical impairment resulting from malnutrition is certain and mental retardation is probable."¹⁰¹ It was the probability of a link between retardation and malnutrition that Scrimshaw wished fellow nutritionists would address. The only scientific data he could cite for such a relationship had been established mainly in pigs and rats, though INCAP had recently undertaken promising studies that appeared to support his hypothesis. The key problem in proving the supposition was the difficulty scientists encountered in controlling for confounding factors such as gross neglect and poor living conditions. How could one attribute poor intellectual performance to malnutrition when a child lived in squalor? Regardless of the precise nature of the hypothesized relationship, Scrimshaw solemnly pronounced that "it will be evident that the effects of early malnutrition are so far-reaching that the nutrition and health of young children cannot be neglected if development schemes and aid programs are to achieve their full objectives in developing countries."¹⁰² Interestingly, the paper noted that because of the timing of brain development in children -- peaking before the age of one -- nutritional marasmus, which strikes children in this age group, would be an important nutritional disease to address.¹⁰³ In keeping with his ongoing struggle for the recognition of infection as an integral part of the cycle of malnutrition and hunger, Scrimshaw noted that improved diet had to be accompanied by preventive and curative applications for infectious disease in order to be successful.¹⁰⁴

In his characteristically dramatic manner, Scrimshaw observed that the relationship between malnutrition and mental retardation was a topic "of such overwhelming importance to the future of the world that definitive research" was essential to determine and define the exact degree of interaction.¹⁰⁵ Further, he highlighted how the productive futures of developing countries would rely on the intellectual (particularly technical) capacities of their populations and that educational programmes and spending on schools and teachers will be of lower value if children are "being damaged now in mind and body."¹⁰⁶ In Scrimshaw's view, strong data were

¹⁰¹Nevin S. Scrimshaw, 'Malnutrition, Learning and Behavior', *The American Journal of Clinical Nutrition*, May 1967, 20(5), 493-502, on p. 497. Although in the development community there was little questioning of permanent stunted growth emerging from malnutrition, a few studies suggested otherwise. See: Samuel Dreizen, Charles N. Spirakis, and Robert E. Stone, 'A comparison of skeletal growth and maturation in undernourished and well-nourished girls before and after menarche', *The Journal of Pediatrics*, 1967, 70(2), pp. 256-63.

¹⁰²Scrimshaw, op. cit., note 101 above, p. 493.

¹⁰³Ibid., p. 494.

¹⁰⁴Ibid., p. 496.

¹⁰⁵Ibid., p. 499.

¹⁰⁶Ibid., p. 500.

needed to convince economic planners and governments to pursue more vigorously the prevention of malnutrition and hunger.¹⁰⁷

Scrimshaw's suggestions rippled through the health community and resulted in substantial publicity. In March 1967, he and John Gordon, his collaborator on nutrition and infection, organized a well-known conference on the topic which they later published in book form.¹⁰⁸ The book and conference sought to inter-relate the issues closest to Scrimshaw's and Gordon's hearts: malnutrition, infection, and learning. Their views encouraged administrators to discuss the continuum of childhood health in an expanded context which incorporated mental health into nutritional dialogue. An article that preceded the Scrimshaw piece in the *American Journal of Clinical Nutrition* and to which Scrimshaw also contributed, circulated widely in the corridors of Unicef. 'Hunger: does it cause brain damage?' presented a historical review of relevant research and followed INCAP investigations. The author concluded that waiting for further scientific evidence on the relationship was tantamount to "global suicide".¹⁰⁹

Scrimshaw demonstrated great dexterity in conveying urgency to all hunger issues he investigated. Undoubtedly due to his personal influence, the Joint FAO/WHO Expert Committee on Nutrition provided 'Nutrition and Mental Development' a major heading in its seventh report in 1967. Some took issue with the hypothesis -- labelling it a fear of nations of retarded people -- while others questioned the utility of such a finding.¹¹⁰ If the deaths of millions of children annually were not sufficient reason for nations to mobilize resources, then why would mental retardation make a difference? This type of rhetoric rarely came up in the dialogue with national planners -- either between nutritionists and planners or policy makers and planners -- since the interested parties were caught up in expanding nutritional programmes. The new fear of nutritionally-induced mental retardation could well be seen in comments in nutritional publications. For example, Jelliffe noted that while childhood mortality and morbidity had negative financial consequences, far "more important from the national planner's view-point is the dubious prospect of trying to achieve intensive educational, technical and economic advancement with a population many of whom may not be

¹⁰⁷Ibid.

¹⁰⁸Nevin S. Scrimshaw and John E. Gordon (eds), *Malnutrition, Learning, and Behavior*, Cambridge, Massachusetts and London, The MIT Press, 1968.

¹⁰⁹Judith Randal, 'Hunger: does it cause brain damage?', *Think*, November-December 1966, pp. 3-7. I found this article with a covering letter from Max Milner in which he spoke of passing it on to Labouisse. Labouisse had earlier expressed interest in the subject. Max Milner, letter to Sherwood Moe, 13 February 1967, UN Archives, CF-NYHQ-09.P (Egger), folder D0157.

¹¹⁰ Nevin S. Scrimshaw, interview, 25 July 1995.

able to reach their intellectual potential."¹¹¹ A group of nutritionists reassessing childhood malnutrition treatments declared in 1969 that "No nation can afford a generation of men and women incapable of functioning in accordance with its genetic potential."¹¹² Despite these bold declarations, it remained clear to all that if there was a link between "genetic potential" and adequate nutrition, then there was sure to be at least one more generation which would not reach its potential.

The Impending Protein Crisis

The tone surrounding world food and hunger issues grew increasingly ominous and stark in America during President Johnson's second term. In his 1967 State of the Union message, Johnson called peace and the "race between food supply and population increase" the great human challenges of the day, a comment which inspired a voluminous White House Paper entitled *The World Food Problem*.¹¹³ This remarkable document deplored the rise in the number of hungry people in the world notwithstanding the operations of FAO, WHO, Unicef, the World Bank (IBRD), and other agencies.¹¹⁴ The report called for increased governmental aid on every level possible to help bring population growth under control and boost food production. Of particular concern to the Johnson administration and to the UN secretariat was the protein "gap", the increasing rift between world protein requirements and supply. Beginning in 1966, the UN Advisory Committee on Science and Technology to Development (ACST) began following up a UN resolution to determine which resources were currently being "directed towards the implementation of proposals designed to close the protein gap".¹¹⁵

The ACST enlisted Scrimshaw to write a document on protein needs and issues in the developing world.¹¹⁶ Scrimshaw's report made it clear to the UN that there were "no short-cuts" to solving protein problems and that the problem, exacerbated by population growth, was rapidly growing worse in numerous

¹¹¹Jelliffe, op. cit., note 44 above, p. 224.

¹¹²*A Practical Guide to Combating Malnutrition*, op. cit., note 77 above, p. 1.

¹¹³*The World Food Problem: A report of the President's science advisory committee*, I, 'Report of the panel on the world food supply', The White House, May 1967, p. 1.

¹¹⁴*Ibid.*, pp. 2-3.

¹¹⁵Teply, op. cit., note 74 above. On average, Unicef spent between \$500,000 and \$800,000 on protein food development annually between 1960 and 1967.

¹¹⁶In the literature the UN Advisory Committee on Science and Technology to Development is alternatively referred to by the acronyms ACST and ACAST. *Report of the Sixth Session of the FAO/Unicef Joint Policy Committee*, op. cit., note 87 above, appendix 2, p. 3.

developing countries.¹¹⁷ As a result of the report -- provocatively entitled *Feeding the expanding world population: international action to avert the protein crises* -- the UN stressed that expanded food production, unless directed toward the needy, would do little to alleviate international protein problems.¹¹⁸ The UN further emphasized that agencies had to be sure that they were not overly focused on technical aspects of the problem and should instead look toward multi-faceted approaches. If they were not successful in bringing the problem "in hand", then, the UN feared, "the outlook is grave".¹¹⁹

The ACST report encouraged some agencies to jockey for power as they saw "the protein problem" attracting world-wide attention and expected increased financial support for protein-related programmes. The new FAO Director-General, A. H. Boerma, believed that the Secretary-General would offer his fullest support to joint FAO/PAG activities that served to co-ordinate actions on the protein problem by UN member countries. Boerma suggested that the PAG "should serve as a focal point for concerted action" and, contended that "a major financial effort on the part of the United Nations family, as well as by Governments, is necessary for any substantial progress in the field."¹²⁰ The PAG was ecstatic to receive such support, especially since its relations with FAO had been rather tenuous in the past. Apparently, however, FAO's support for the PAG was only superficial.

According to Scrimshaw, it was evident during this time that WHO and Unicef liked the PAG since its expertise had been top-notch. On the other hand, the FAO frowned on the PAG since Autret asserted that FAO had sufficient expertise on its own.¹²¹ In May 1968, FAO became the supervising and administering agency of the

¹¹⁷'The Protein Problem', 1 October 1968, UN Economic and Social Council, New York, E/4592, p. 6.

¹¹⁸Ibid., p. 10. See: 'Feeding the expanding world population: international action to avert the protein crises', July 1967, Advisory Committee on the Application of Science and Technology to Development, E/4343. Significantly, ACST (under Scrimshaw's influence) did not believe that the ongoing Green Revolution would go far toward stemming the protein gap for young children since cereals were relatively low in essential proteins. See: 'The Protein Problem, addendum, comments of the Advisory Committee on the Application of Science and Technology to Development', UN, E/4592/Add.2, 8 October 1968, p. 4. Scrimshaw authored the report during a cruise to Europe for a nutrition conference in Hamburg. His indelible mark can be read in the urgency of the findings and in the support of the PAG. Pokrovsky and Bhatia aided him in the task and added credibility to the final product. 'Protein Advisory Group Report on the Twentieth Meeting', Paris, PAG Meeting report document 3.14/17, 19-23 June 1972, Unicef Archives, CF-NYHQ-05ANS-002, p. 5. See also: Nevin S. Scrimshaw, interview, 25 July 1995.

¹¹⁹'The Protein Problem', op. cit., note 117 above, p. 7.

¹²⁰'The protein problem: addendum, letter to the under-secretary-general for economic and social affairs from the Director-General of the Food and Agricultural Organization', E/4592/Add.4, 15 November 1968, pp. 1-3, on p. 3.

¹²¹Nevin S. Scrimshaw, interview, 18 July 1995.

PAG, thereby providing it with greater control over PAG activities.¹²² In less than a year, Unicef became upset with the manner in which FAO was dealing with the PAG. Heyward wrote a letter to FAO in which he sought to convey "the growing impression that FAO, as administering agency, does not intend to give the support necessary to make the PAG effective."¹²³ Heyward was irked that FAO had discouraged interaction between other agencies and the PAG, except during PAG sessions, and worse, that FAO was using "negative control" to inhibit the travel of the PAG Secretary and other PAG activities. Rather than expressing what FAO wished the PAG to accomplish, Heyward alleged that "FAO has so far given no indication of anything it does want done." (emphasis his)¹²⁴ At one point in the letter Heyward's tone turned furious:

If FAO wishes to keep a tight control, perhaps you would prefer to move the Secretariat to Rome, where at least the control would be less remote. Your indication that if another person is contributed to the Secretariat, he would be stationed in Rome, points in this same direction. Unicef would not like to lose them, but the present situation is not satisfactory.¹²⁵

There would be no such move to Rome for the PAG, and Heyward's remarks seemed to have some positive effect. A week later, Autret wrote a conciliatory piece about FAO and the PAG in which he reasonably outlined the PAG's responsibilities and FAO's working relationship with the group, especially in light of the protein crisis.¹²⁶ For better or worse, the protein crisis would force FAO and the PAG to work together more closely.¹²⁷

In 1969, the PAG commented on an ACST protein survey distributed by the Secretary-General's office and underlined the projects which seemed most

¹²²M. Autret, 'FAO and the Protein Advisory Group', 14 March 1969, FAO Nutrition Division Library Rome, NU: MISC/69/6, p. 3.

¹²³E. J. R. Heyward, letter to Wells, 7 March 1969, FAO Archives, I. PAG membership 2/4. In this letter, which was marked "Personal and Confidential" and was not written on Unicef letterhead, Heyward commented on the shallowness of FAO's commitment to the PAG. It seemed to Heyward that Boerma and the FAO governing bodies were publicly expressing support for the PAG while, in fact, denigrating it.

¹²⁴Ibid.

¹²⁵Ibid.

¹²⁶Autret, *op. cit.*, note 122 above. This document nevertheless reflected the Nutrition Division's serious concerns over the PAG infringing on FAO's areas of expertise. See pp. 8-9.

¹²⁷See: *Report of the 15th Session of the FAO Conference*, 8-27 November 1969, Rome, FAO, paragraphs 141-54 and 284-301.

promising.¹²⁸ Among several African nations, the scientists considered the development of the fishing, cattle, and soybean industries central to boosting protein consumption. Thus, when fish production figures showed an increase of roughly 50% between 1966 and 1967 along the Ivory Coast, the PAG excitedly noted that such a rate would enable annual fish consumption, which was at 17 kilograms per person in 1960, to rise to 20 kilograms in 1970. Alongside nutrition education programmes and applied nutrition projects, the PAG opined that the combined efforts would "lead to greater consumption of protein rich foods like fish by the most vulnerable groups (young children aged 1-4 and pregnant and lactating women)."¹²⁹

FAO figures were clearly indicating that protein was one of many deficits with which the developing world would have to contend. In particular, FAO statisticians noted that the rate of agricultural production in roughly one third of developing countries was not keeping pace with the rate of population increase. One did not have to assume perfect food distribution to know that the same food supply for more people invariably signified less food for the poor. It was therefore the hope of food technologists that technological improvements -- higher yielding grains and expanded fertilizer use -- would bridge this food gap.¹³⁰ Although the FAO Conference urged closer attention to food habits, women's training, industrial worker feeding, and handbook and manual production, protein concerns dominated the budget.¹³¹ By 1969, FAO's protein activities involved more than thirty-seven millions dollars, four million of which came from the Nutrition Division's regular programme and the remainder from other agencies.¹³² Contemporaneously, a few forward-looking nutritionists were considering the world protein gap in a vastly different context.

¹²⁸For the immediate PAG response to the ACST report see: 'The protein problem: addendum, comments of the FAO/WHO Unicef Protein Advisory Group', 7 October 1968, E/4592/add.1.

¹²⁹Note on the protein problem: report by the PAG secretariat', September 1969, in A. Sachs and P. Cormier (eds), *The PAG Compendium: The Collected Papers Issued by the Protein-Calorie Advisory Group of the United Nations System, 1956-1973*, New York, Worldmark Press, Ltd., E, 1975, E139-E145, on p. E140.

¹³⁰*Report of the Fourteenth Session of the Conference, 4-23 November 1967*, Rome, FAO, 1968, pp. 14-15.

¹³¹*Ibid.*, p. 64.

¹³²*Report of the Fifteenth Session of the Conference, 8-27 November 1969*, 1969, Rome, FAO, item 11 of the provisional agenda, table 1, p. 10. To put these figures in perspective, FAO's entire budget at the time was roughly 50 million dollars plus extra-budgetary income of an additional 112 million dollars. Ralph W. Phillips, *FAO: its origins, formation and evolution 1945-1981*, Rome, FAO, 1981, p. 78. These statistics should be considered with caution, since they were produced under the influence of the UN's desire to see its agencies devoting huge funds to protein issues. Since the regular programme of the Nutrition Division was slightly over one million dollars, some acrobatic accounting techniques were used to arrive at these numbers. See: *Report of the Fourteenth Session of the FAO Conference*, op. cit., note 130 above, annex 1, p. 6.

Jelliffe, for example, believed that the greatest problem in protein supplies was emanating from the decline of breastfeeding in developing countries. With increasing urbanization and its concomitant "dedomestication of women", Jelliffe foresaw a doubly troubling problem: women would halt breastfeeding early and search for substantial quantities of breastmilk substitute. He bemoaned that attempts to reverse this trend had had no impact and also had not been undertaken thoughtfully. Further, national food planners and nutritionists rarely considered breastmilk as a food, perhaps, Jelliffe speculated, "because it is not served on a plate, or grown, or bought".¹³³ In Jelliffe's unpopular view, the decline in breastfeeding could only widen the much-discussed "protein gap" because it would take away one successful protein source and create the need for another.¹³⁴

The term "food crisis" was very much in vogue late in the decade as major disasters emerged at Biafra in Nigeria and in India during 1966-1967. Ironically, at the very time when long-term development issues were being discussed agencies had to refocus their attention on emergency food situations.¹³⁵ Relations between the UN and the PAG increased and improved as PAG members successfully emphasized the importance of protein in global nutrition. Their approach resembled FAO's macro perspective on food consumption and production in the world: assumptions about nutritional status of the population were based on total food available. The nuances of income groups and the socio-cultural background that could prevent equal distribution were not deeply explored. A critical characteristic of food and protein surveys since the first ones were undertaken was that, invariably, they monitored overall changes in the level of production of a particular type of food and then extrapolated how this change would affect individuals' diets. The PAG was primarily interested in boosting general levels of protein production in developing countries and encouraged the UN Secretary-General to engage countries in discussion on this issue.

The lurking question that the PAG frequently overlooked was whether the educational and agricultural programmes would (or had) improved the protein status of the vulnerable members of the population. All the PAG logic seemed grounded in the assumption that any increase in food production of any type would necessarily result in an increase in individual consumption of that food. The PAG could therefore

¹³³Derrick B. Jelliffe, 'Breast-milk and the world protein gap', *Clinical Pediatrics*, 7(2), February 1968, pp. 96-99, on p. 99.

¹³⁴*Ibid.* For a brief description of the industrial and organizational developments which followed the breastmilk issue, see: Gabrielle Palmer, *The Politics of Breastfeeding*, London, Pandora Press, 1993, pp. 199-227.

¹³⁵Abundant literature supports this perspective. I found Teply's files at Unicef to be extremely revealing about the return of the E, formerly representing emergency, in Unicef's name.

comment with ease that in many developing countries, "the major problem areas are known, awareness of what needs to be done exists, even plans to increase production and consumption of various protein sources have been worked up, but there is a lack of sufficient help, financial and technical, to start with implementation."¹³⁶ This optimism seemed to suggest, once again, that the theoretical research problems of malnutrition, at least in the case of protein, had been solved, and the only remaining obstacle was the execution of programmes. Echoes of this could be heard at all the UN agencies. At Unicef, Teply stated in 1968 that "Enough is known to provide a reasonable basis for meeting protein and calorie needs of the world's children through various alternatives."¹³⁷ Seeing the need for protein expertise diminishing and the need for implementation increasing, the ACST had recommended that the PAG be expanded, which it was in 1968, to include other areas of expertise -- including human nutritionists, agronomists, economists, paediatricians, food technologists, sociologists, and marketing experts.¹³⁸ The task before them, and before all the UN agencies, was to fill the protein gap.¹³⁹ The protein gap de-personalized the fight against hunger in children that had had so many emotional elements during the previous decades. At the technical agencies, the previously ubiquitous photographs of children suffering from marasmus and kwashiorkor were gone; in their place one could find charts depicting protein deficits.

Against the powerful backdrop of PAG certainty on protein questions were a few rather subtle cries for a middle-of-the-road approach. Unicef had a fairly muted response to the ACST report, though like its peers, expressed concerns about the ramifications of protein deficiencies on "the health, mental alertness and dynamism of the population" in developing countries.¹⁴⁰ Unicef personnel were moderately sceptical of advances in protein flours and other technologically advanced approaches to PCM. Teply enjoyed recounting an anecdote, set in the Philippines after a nutrition conference, to Unicef staff: "There was a great deal of discussion about village units to make coconut flour. I threw a bombshell by asking 'How far can one go in child feeding with fresh coconut?' None of the experts present, including Dr. Gopalan of

¹³⁶'Note on the protein problem', op. cit., note 129 above, p. E145.

¹³⁷L. J. Teply, op. cit., note 45 above, p. 1.

¹³⁸This increase in types of expertise was reflected in the inflation of the PAG budget from \$33,000 in 1966 to \$120,000 in 1970. *Report of the Fifteenth Session of the Conference*, op. cit., note 132 above, p. 29.

¹³⁹*Ibid.*, p. 30.

¹⁴⁰Rosalind Harris, letter to all non-governmental organizations having consultative status with Unicef, 8 March 1968, UN Archives, CF/NYH/05EB, CF-NYH-6, folder S0072.

India...could provide the answer."¹⁴¹ At the time, however, Gopalan, the director of the Nutrition Research Laboratories in Hyderabad, was hardly as enthralled by the protein mania as were his peers. To the chagrin of many nutritionists, he referred to the protein gap as the "so-called 'protein problem'" which formed only a small part of broader nutritional concerns.¹⁴² His classic 1968 article on kwashiorkor and marasmus powerfully re-assessed the roles of calories and protein in the pathogenesis of kwashiorkor and led him to conclude that caloric increases, even in a child with kwashiorkor, could promote better protein utilization. Gopalan remarked that this insight had to be promoted "in these days of unceasing quest of protein concentrates and protein isolates."¹⁴³ Perhaps due to his prominence as a native researcher operating in India, one of the countries with the highest levels of PCM in the world, Gopalan often inspired controversy. He believed, like McLaren, that correction of caloric deficiencies should be the major thrust of efforts in India. It was unwelcome news at the PAG secretariat to hear of Gopalan stating that "The distribution of expensive protein-rich foods to children in the face of such calorie insufficiency would be a most wasteful and uneconomic procedure."¹⁴⁴ With increased calories, Gopalan felt, the protein problem itself would be "considerably minimised".¹⁴⁵ He frowned on industrial plans to mass produce protein-rich foods because "The average man in the rural area at present cannot afford even the raw natural foods in amounts which are needed to meet his hunger. It should be obvious that formulations derived from processing these foods will be even farther beyond his reach."¹⁴⁶ In the same vein, researchers investigating malnutrition and infection in Colombia commented that "All the sophisticated gadgetry of modern medicine is of little avail at the village level-where the children and their mothers are. Neither the Western consultant, nor the Western-trained and oriented local physician can hope to accomplish much until he

¹⁴¹L. J. Teply, letter to M. Gaan on Philippines applied nutrition, 28 February 1967, UN Archives, CF/NYH/05EB, CF-NYH-6, folder S0072.

¹⁴²C. Gopalan, "The 'Protein Problem'", presented at the symposium on science for citizens, New Delhi, November 1969, in *The Works of C. Gopalan*, LSHTM Archives, p. 9.

¹⁴³C. Gopalan, 'Kwashiorkor and marasmus: evolution and distinguishing features', in R. A. McCance and E. M. Widdowson (eds), *Calorie deficiencies and protein deficiencies*, London, Churchill, 1968, 49-60, on p. 53. Waterlow remarked over two decades later that this paper impacted the nutritional community in three major ways: "it showed the artificiality of regarding malnutrition, as it evolves in a community, as a single-factor disease; it restored the balance when the pendulum had swung too far towards exaggerating the importance of protein; and it displayed the dangers of basing public health policy on inadequate scientific evidence." See 'Classics in Indian Medicine', *The National Medical Journal of India*, May/June 1992, 5(3), 145-51, on p. 151.

¹⁴⁴Gopalan, op. cit., note 142 above, p. 13.

¹⁴⁵Ibid.

¹⁴⁶Ibid.

begins to grasp, in the specific environment in which he is working, how the eco-system, there, is operating to produce PCM."¹⁴⁷

In spite of the criticism protein received from a few vocal nutritionists, Unicef and its counterparts had latched onto it. In 1982, Les Teply, apparently concerned about his place in protein history, sent John Charnow, the unofficial Unicef historian, a revealing note about the nature of protein in the Unicef establishment. Teply, a former member of the PAG, noted that "nutritionists in general, including the Unicef Senior Nutritionists [Teply included]" had "advocated a reasonable course" for protein programmes and policies during the late-1960s and up to the present time. Referring to the protein mania that then revealed itself, Teply lamented that "a number of Persuasive Protein Promoters got the pendulum to swing too far in one direction."¹⁴⁸ Attached to this note Teply included a letter he had written in October 1966 to Cyril Hunnikin, a food conservation engineer then working for Unicef in Thailand. While counselling on the constituency of high-protein weaning foods, Teply had suggested that "There is a real question of whether mothers can be persuaded to use concentrates...as a true supplement, adjusting the addition to the diet roughly in relation to the need for supplementation...However, I am willing to be convinced that a true concentrate other than skim milkpowder [sic] can in fact be used by mothers without undue wastage."¹⁴⁹ At least in Teply's mind, this was the type of practical questioning which highlighted what he perceived to be the informed opinions promoted by nutritionists on protein issues. These pragmatic protein proponents, while uncertain of the efficacy of protein solutions, were anxiously hoping that one would emerge. Apparently many of Teply's colleagues adopted a similar cautiously-optimistic stance toward Unicef programming advice. Concerns over the efficacy of protein-rich foods were apparent at the top of the agency. In Labouisse's 1967 progress report to the Board, he expressed concern that such products were invariably not economically sustainable and that the ability for markets to maintain demand should be the determining factor for initiation of such projects.¹⁵⁰ In Labouisse's mind, protein programmes had to be approached with the same research questions about the same issues that a new product on the supermarket shelves in a developed country

¹⁴⁷Joe D. Wray and Alfredo Aguirre, 'Protein-calorie malnutrition in Candelaria, Colombia - I. prevalence: social and demographic causal factors', *The Journal of Tropical Pediatrics*, September 1969, 76-98, on p. 96.

¹⁴⁸Les Teply, interoffice memorandum to J. Charnow, 15 October 1982, Unicef Archives, Teply file, PR-NU-001.

¹⁴⁹Les Teply, letter to Cyril Hunnikin, 10 October 1966, Unicef Archives, Teply file PR-NU-001.

¹⁵⁰Henry Labouisse, 'General Progress Report of the Executive Director', 1 May 1967, E/ICEF/558, paragraph 62.

would have: consumer marketing, product acceptability, and distribution.¹⁵¹

Labouisse's viewpoint resulted in mixed signals within the agency about the purpose and methods of protein programmes.

Dr. G. Sicault, the Unicef regional director in Paris, expressed his concern to Heyward that protein-rich food efforts suffered from a host of confusing problems, the greatest of which was a "confusion between the goals we are trying to reach in the promotion of a weaning-food".¹⁵² A common expert consultancy then involved developing industrial-style marketing campaigns for high-protein childhood foods in order to spur their purchase among the poor. Sicault felt that many of the protein programme problems had lagged because of the utilization in the developing world of "marketing experts coming from the USA, the UK or France, who know nothing about the population, about feeding habits, commercial channels, etc., and who have to learn everything before coming to any preliminary conclusion".¹⁵³ Sicault thereby flagged the long-lingering concern of Unicef -- that expert consultants were slowing the quality and speed of their operations and were promoting an "unrealistic" approach. In Sicault's emotional words: "If there were no urgency in this matter, and if there were not so many children dying every year from malnutrition, I would personally say we have plenty of time to discuss surveys, evaluation of surveys, super experts, etc.; but I believe that all this unrealistic view of marketing by foreigners is delaying action."¹⁵⁴ Sicault's statement in part reflected statements made years earlier at Bellagio when Unicef administrators urged the implementation of programmes even if all the expert-urged data had not been gathered.¹⁵⁵ On an administrative level Sicault's words represented a rise in the anti-expert rhetoric: experts from outside the agency seemed to retard programme implementation, were too expensive, and cost children's lives.

In Black's history of Unicef, she asserted that 1967 essentially marked the end of Unicef's foray into the manufacture of high-protein foods.¹⁵⁶ Although the evidence reflects new-found reservations on the part of Unicef staff, protein initiatives had

¹⁵¹Ibid., paragraph 73.

¹⁵²G. Sicault, letter to E. J. R. Heyward, 15 November 1967, UN Archives, CF-NYHQ-09.P (Egger), folder D0157.

¹⁵³Ibid.

¹⁵⁴Ibid.

¹⁵⁵Apparently the uneasiness Unicef felt toward FAO on nutrition was often engendered by too little or too much input. In a piece of Teply's correspondence following a trip to Brazil, he remarked that "there is insufficient technical support from the FAO side as far as national nutrition programming in Brazil is concerned." L. J. Teply, letter to Alice Shaffer, Unicef Representative in Brazil, 10 November 1967, UN Archives, CF-NYHQ-09.P (Egger), folder D0157.

¹⁵⁶Black, *op. cit.*, note 97 above, pp. 162-63.

hardly ended. Unicef took a strong lead in defining the nature of protein policies and initiatives during the latter part of the decade. In 1967 Max Milner, Unicef's senior food technologist, began addressing the failure of concerted protein programmes in reaching their intended recipients. In a letter to FAO and WHO, Milner expressed his desire to supplement the breadth of the protein-rich weaning foods programmes. Milner's rationale, which well reflected his awareness of protein implementation obstacles in the field, was

based simply on the fact that in most societies with which we are concerned, the concept that children should be weaned on special foods is still largely unknown and...it will take many years of intensive effort to accomplish substantive change in this situation...I believe we should enlarge our joint activities to improve the nutritive value of the staple foods used by families, which are also the major components of children's diets during and after the time of weaning.¹⁵⁷

Milner's comments mirrored the growing current, in the context of the Green Revolution, of raising the protein levels in the foods consumed by all family members, rather than by only the pre-school children. As the urgency of international protein problems was increasingly swept into the limelight, the general focus of policy was more broadly targeted to the macro-level scarcity of protein rather than the micro- or familial-level maldistribution of it.

Unicef did run several of its operations in much the same vein as FAO and WHO. Milk conservation projects, for example, continued to be a significant part of Unicef's operations though they failed to show demonstrable signs of improving childhood health. Throughout the 1960s, Unicef and FAO worked closely with the Kenyan authorities on plans to improve liquid milk sales and production as well as the development of cheese, whole and skim milk powder production. A Unicef food conservation officer noted that these programmes were aligned with

Unicef's aims as they involve both direct and indirect aid to the mother and child population as well as having a sound economic effect to improve the standard of living in the country...I think we have given a clear demonstration of protein which has been made available to the population and the economy of both rural and city life have been benefited accordingly.¹⁵⁸

¹⁵⁷Max Milner, letter to Dr. Marcel Autret and Dr. E. de Maeyer, 16 March 1967, Scrimshaw personal collection.

¹⁵⁸Robert L. Cooper, letter to headquarters, 26 April 1967, Unicef Archives, CF-NYH-06H, box T021.

Thus, like FAO, Unicef continued to work under the operational paradigm that increased production of a nutritious food would invariably result in improved nutrition for mothers and children.

Management Decisions

The 1960s were the first years when UN nutritional programmes were sufficiently intact for spirited idealistic clashes about their nature to arise. And arise they did. Although the debates are difficult to locate in historical sources, protein advocacy and opposition clearly reached a boggling level by the turn of the decade. The groups were strategically well-defined: one group consisting of players like Scrimshaw felt that protein could not receive too much attention and had to be a central focus of all nutritional undertakings; another group, consisting of researchers, felt that protein was one of many important nutritional issues but had come to dominate the discipline; the last group included researchers like McLaren who felt that the pendulum should swing primarily over caloric territory since calories were the most important nutrient. While this sequestration may not precisely describe the course of nutritional interests in science and policy at the time, it does offer a diagram which well sums up the general climate of nutritional thought.

Carpenter has pointed out that papers by protein sceptics like McLaren and Jelliffe were exceedingly rare between 1955-1967. While they were trying to draw attention to energy, protein funding and the general wave of protein enthusiasm were reflected in the vast majority of publications relating to protein mixtures without any attention to caloric needs.¹⁵⁹ Béhar, who considered himself to have fit in the moderate group from above, stated that he and most of his colleagues agreed that "kwashiorkor was the top of the iceberg; we were much more concerned with the underlying causes...the problem was not [so much that] they were at risk for kwashiorkor but that they could not develop to their full genetic potential because of sub-clinical malnutrition."¹⁶⁰ Béhar's words allude to Sen at the beginning of the decade when he launched the FFHC and envisaged the major nutritional problem to be "hidden hunger". In Béhar's mind, "All studies on mental development, growth, mortality, original infection, all those studies were oriented to our understanding of

¹⁵⁹Kenneth J. Carpenter, *Protein and Energy: A Study of Changing Ideas in Nutrition*, New York, Cambridge University Press, 1994, pp. 184-85.

¹⁶⁰Moisés Béhar, interview, 29 December 1995.

hidden hunger."¹⁶¹ He and his researchers "were not concerned about kwashiorkor [as much as] we were concerned about those children who were not growing well...and they represented the majority of the children."¹⁶² To the staff at INCAP as well as at other nutritional institutes, kwashiorkor was simply an indicator of the general nutritional situation. The physicians and many policy makers, however, continued to be disease-oriented; the logical policy to address an obsession with kwashiorkor was to prioritize the world's protein needs. Thus, while marasmus, calories, vitamin deficiencies, and more importantly, hidden hunger, remained unattractive political outcasts, protein was politicized. It was as though the broad category of health that this dissertation treats -- hunger and malnutrition -- had been condensed into a singular interest. Having had little luck with ANPs or other programmes in solving problems of hunger and malnutrition, the frame on which the debate was built shifted to protein, "the most significant nutritional problem", and promised success, or at least aversion of disaster.

The late-1960s highlight how easily policy proclivities could move in one direction or another based on the views of nutritionists, physicians, and health advocates who carried great influence in all the UN agencies. These policy swings may in part be accounted for by antiquated management structures unable to cope with increasing revenues and complex programmes. Even a large agency like Unicef, whose total income was approaching \$60 million at the end of the decade, had a surprisingly primitive management and policy structure that promoted inconsistency, indecision, and contradiction. It was during this time period that Stein, who had consulted for Unicef considerably, began broaching these issues at an executive level. He found executive-level decision-making to be an informal process principally controlled by a handful of people, usually the Executive Director, Deputy Executive Director, and Heyward. Staff meetings, according to Stein, were "discursive" and rather than building policies or investigating options, only served to inform everyone of ongoing activities. On the occasions when field staff came in to report from the field, their presentations served informational purposes alone. The results of these arrangements began to fluster personnel at the end of the decade. The central problem was that frequently, key executive personnel could not obtain the vital information they needed in order to make informed decisions -- division directors and field staff were not consulted in a comprehensive or effective manner.¹⁶³ Margaret Gaan, who

¹⁶¹Ibid.

¹⁶²Ibid.

¹⁶³Herman Stein, interview conducted by Jonathan Power, 7 and 16 December 1982, Unicef Archives, interview file, pp. 16-17.

by the late-1960s was in charge of Unicef's Asia desk, felt that executive level decision-making created a disastrous state of affairs, particularly in the relations between the field and headquarters. She contended that "decisions were made at that time at Headquarters without reference" and that Headquarters had become "an organization in itself."¹⁶⁴ Gaan believed that only field personnel developed commitment since they were the ones who had the chance to view programmes while "It's impossible to develop commitment at Headquarters when you're arguing about whether you should have two windows, or one window, or a grey chair or a blue chair."¹⁶⁵

Although FAO and WHO had different management structures, they were similarly ill-suited to pressing consistently for specific objectives. It is therefore comprehensible how at the same time that the nutritional debate was engulfing protein, a vertical health concentration, the same agencies were promoting horizontal national plans. Governments were not approached and told to integrate protein concerns into every government ministry; they were asked to include childhood nutrition. This incongruity highlights the unstable path of nutritional policy. Apparently, nutritional issues were sufficiently large to enable the advocacy of plans built on contradictions.

¹⁶⁴Margaret Gaan, interview conducted by John Charnow, 21 November 1983, Unicef Archives, interview file, p. 15.

¹⁶⁵*Ibid.*

Chapter VII

The Rise of Planning and the Fall of Protein

Time is short. Urgent and sustained action is vital. The Conference, therefore, calls upon all peoples expressing their will as individuals, and through their Governments and non-governmental organizations, to work together to bring about the end of the age-old scourge of hunger.

From the World Food Conference's *Universal Declaration on The Eradication of Hunger and Malnutrition*, Rome, 16 November 1974¹

A Different Story

The first years of the 1970s mark a fascinating point in the history of nutrition policy. Interest in protein, the issue that had dominated substantial UN agency resources and expertise, reached its peak before beginning a rapid fall from grace. In protein's place, policy makers lifted nutrition in national planning and other horizontal strategies to gilded positions. In a sense, nutrition policy in the 1970s was the battleground for a fierce ideological competition between nutritionists subscribing to vertical and horizontal schools of thought. The vertical nutritionists continued to pursue straightforward, "magic bullet" solutions to nutritional problems, especially in the area of protein. The horizontal nutritionists, however, continued to shift away from simple supply-side solutions to the problem -- such as expanded supplementary feeding programmes -- and looked toward developing countries to fix their own problems in the context of national development policy.

In general, the orthodox application of many nutritional concepts had resulted in substantial accomplishments which bolstered the field. Aykroyd, the former director of FAO's Nutrition Division, charted the mutating character of nutrition deficiency disease in *The Conquest of Deficiency Diseases*, written for FAO and WHO in 1970. In the study, he highlighted the remarkable progress that had been made since the century began against previously prevalent diseases such as pellagra, beriberi, rickets, and scurvy. On the topic of PCM, however, Aykroyd commented that it was "a different story".² It was this "different story" that was driving a spike between the

¹*Report of the World Food Conference, Rome, 5-16 November 1974*, New York, United Nations, 1975, p. 3.

²W. R. Aykroyd, *Conquest of Deficiency Diseases: Achievements and Prospects*, Geneva, WHO, FFHC Basic Study no. 24, 1970, p. 96.

vertical and horizontal nutritionists, and between the nutritionists and the policy makers. Decades of efforts against PCM had shown little progress. Nevertheless, a vertical view of PCM, rooted in the role of protein, had continued to be a magnet for attention. While the PAG and other forces had worked to elicit greater attention to protein, the results backfired. The policy makers began to scrutinize their failed marriage to protein issues and found that hunger and malnutrition could rarely be addressed by a surgically precise project or programme. As a result, consensus began to build among public health leaders that nutrition itself could not be disentangled from the complex interactions of social, cultural, agricultural, and economic issues which influenced it.

Protein Interest Wanes

During his last years at FAO in 1970 and 1971, Autret, the director of the FAO Nutrition Division, pragmatically emphasized that, while one could wait for socio-economic improvements to reach the needs of the malnourished child, in the meantime something had to be done to meet their pressing requirements. His perspectives on FAO's work reflected the transformation that had occurred since the days of Orr. Whereas Orr had pushed simply for increased global production of food, Autret acknowledged that the assumption of a positive correlation between increased food production and improved nutrition in the homes of the poor was bunk. Autret wrote, "Even if national agriculture development plans meet the average national requirements in twenty years' time, the distribution between regions or socio-economic groups will remain such that large groups of the population will be underfed and malnourished."³ In the hope of balancing long- and short-term goals, he embraced a number of vertical approaches to the horizontally-based problems he perceived.⁴ In line with his belief that protein deficiency continued to be the greatest problem facing global nutrition, he broadcast that the Nutrition Division could provide plant protein formulae "suitable for any country" that could treat the problem in the short-term.⁵ According to Autret, the world's ongoing nutrition problems were not the fault of scientists, nutritionists, or policy makers devoted to nutritional issues: "The bottleneck [in making progress in nutrition] is mainly the insufficient appreciation of

³M. Autret, 'Philosophy and main lines of orientation of the programme of work of the Nutrition Division', *Nutrition Newsletter*, 1970, 8(2), 50-56, on pp. 51-2.

⁴Importantly, however, Autret recognized the shortcomings of vertical nutrition programmes to date. In the case of food distribution programmes for example, he lamented that they perhaps reached 2-3% of the world's needy pre-school aged children. *Ibid.*, p. 52.

⁵*Ibid.*, p. 51.

the problem and information on solutions by governments and population."⁶ In addition to industrial feeding and applied nutrition, FAO's platform called for governments to sponsor massive feeding programmes in order to reduce morbidity and mortality in the short-run and in the long-run to build a "new generation [of] physically and mentally alert [citizens]".⁷

Since the publication of the ACST report, the protein gap and crisis had continued to be among the UN's most pressing concerns and commanded considerable energy from the UN General Assembly. From the creation of the specialized UN agencies to the present day, the UN had generally allowed FAO, WHO, and Unicef the autonomy and space to engage in the issues they wished to address. While the independence of these agencies was not thwarted, the UN took an interest in protein which effectively influenced WHO, FAO, and Unicef operations. In 1970, the Economic and Social Council of the UN requested FAO to direct efforts toward the realization of high-protein marine foods and asked all three agencies to "intensify action and research on the health aspects of malnutrition".⁸ Although the UN did not consistently define malnutrition as being synonymous with protein-malnutrition, there was no doubt that protein was a central inspiration for these recommendations.

Ironically, at the same time the UN was calling for intensified protein action, the sentiment spoken by McLaren years earlier about the importance of examining the whole spectrum of PCM was becoming mainstream. Aykroyd, who by 1970 was a revered nutritional figure, summed up the state of PCM:

In any country where protein-calorie malnutrition exists, the whole spectrum will be found. Certain forms may, however, predominate. In tropical Africa, for example, kwashiorkor as described above is particularly common and has attracted the special attention of doctors in that region. **In the developing countries generally, however,**

⁶Ibid.

⁷Ibid., p. 52. Although the PAG generally applauded supplementary protein feeding programmes, its secretariat noted that "because of the highly complex inter-relations between protein and other nutritional and environmental factors and because we are dealing with biological problems of man, one cannot expect results except as a result of years of well-organized effort." The PAG, however, could only cite examples of such time-intensive success stories in developed countries. 'Commentary on the world protein situation', New York, 17th PAG Meeting, Agenda item 8.13, PAG Document 1.2.3/5, LSHTM Archives, PAG file, 27 March 1970.

⁸Draft resolutions recommended by the commission for social development for adoption by the economic and social council at its 21st session concerning Unicef, 16 April 1970, New York, E/ICEF/CRP/70-1/Add.2, p. 3.

forms in which marasmus is the most prominent clinical feature occur more frequently than kwashiorkor. (emphasis mine)⁹

Parroting McLaren, Aykroyd continued, "There seems to be a tendency toward a proportionate increase in marasmus, which is probably connected with the growth of urbanization under wretched conditions. In general, marasmus is the form of protein-calorie malnutrition characteristic of the congested shanty-town, and kwashiorkor the form characteristic of the village."¹⁰ Considering Aykroyd's piece was published jointly by FAO and WHO, his views should be considered as representative of, or at least condoned by, the nutrition divisions at both agencies. His comments provide evidence of a clear shift in the mode of thinking about nutritional disease, precisely at the time when the clamour over protein was reaching its height. Bengoa at WHO described the transformation in the following terms: "Since the period when acute specific deficiency diseases, particularly vitamin deficiency diseases, were easily identifiable there has been a clear trend toward forms of malnutrition that are less defined, more moderate and therefore more difficult to quantify."¹¹ By opening their concerns to the less obvious symptoms of malnutrition, the nutritionists found the scope of their knowledge seriously handicapped.¹²

FAO partly responded to the protein gap concerns of the UN with the Indicative World Plan for Agricultural Development (IWP), a study which utilized figures on population growth and food production to provide a blueprint for future agricultural endeavours and production goals for 1975 and 1985. Reflected in the IWP was the popularity of the protein-related policies. The plan called for agricultural schemes centred around protein needs, such as increased fish harvesting as well as poultry and pig production. Although the majority of recommendations were more

⁹Aykroyd, *op. cit.*, note 2 above, p. 51. Adding substantial credibility to McLaren's arguments, Aykroyd cited McLaren and a handful of other nutritionists who had hypothesized or observed the growing prevalence of marasmus in developing countries. (pp. 56-7)

¹⁰*Ibid.*, p. 51.

¹¹J. M. Bengoa, 'The state of world nutrition', 1973, WHO Nutr/73.1, Bengoa personal collection, p. 1. As early as 1971, Bengoa had suggested that the point prevalence of kwashiorkor in developing countries was in the range of .2%-1.6% whereas marasmus was 1.2%-6.8%. His data helped propel scientists toward a more reasonable conception of world protein problems. J. M. Bengoa, 'Significance of malnutrition and priorities for its prevention', paper presented at International Conference on Nutrition, National Development, and Planning, Cambridge, Massachusetts, 19-21 October 1971, Bengoa personal collection, p. 4.

¹²Bengoa reported the findings of new data which indicated that in Latin America, malnutrition was either the underlying or associated cause of death in 53% of childhood deaths under the age of five. Of the cases of malnutrition, the vast majority were characterized as being an intermediate form of malnutrition – neither marasmus nor kwashiorkor per se. Bengoa, 'The state of world nutrition', *op. cit.*, note 11 above, pp. 2, 3, 9.

concerned with simply boosting staple food supplies, especially cereals, than with addressing specific nutritional deficiencies, the document was fundamentally a guideline for agriculture, not for health. Of the five key recommendations, one was linked to diet while the others called for economic devices such as "earning and saving foreign exchange that is crucial to financing overall development".¹³ Increasingly, socio-economic jargon was replacing nutritional rhetoric, a literal reflection of the changing landscape for nutrition.

Strategy Statement to Avert The Protein Crisis

The last great push for protein came in May 1971 when the UN published a reincarnation of the 1968 ACST report on the impending protein crisis. According to U. Thant, then the UN Secretary-General, the experts' report included "substantive, institutional and financial steps that must be undertaken if effective action on this critical problem is to materialize."¹⁴ The panel that unanimously approved the report, entitled *Strategy statement on action to avert the protein crisis in the developing countries*, included C. Subramaniam, the minister of planning for India, Teply and Milner from Unicef, Autret, and Scrimshaw. As its name suggested, the report dealt almost entirely with protein issues with no discussion of a de-emphasis of protein issues or increased emphasis of calories. According to the document, the protein crisis was then not **impending**, but rather was "**real**".¹⁵ Among the key actions to be undertaken, the report recommended that governments in developing countries make weighty statements about their commitment and plan to attack protein malnutrition; that developed countries' governments and the UN support these initiatives and create a special "fund for averting the protein crisis"; and that the PAG be expanded to include all UN agencies which work on related concerns.¹⁶ As the report summed up the past efforts and planned for future actions, it stated that the complexity of the problem combined with failed simplistic solutions were at the root of the deteriorating situation.¹⁷ In order to delegate responsibility, the committee carved out a large chunk

¹³*Strategy for Plenty: The Indicative World Plan for Agricultural Development*, Rome, FAO, 1970, p. 7.

¹⁴*Strategy statement on action to avert the protein crisis in the developing countries*, New York, United Nations, 1971, p. iv.

¹⁵*Ibid.*, p. 14.

¹⁶*Ibid.*, pp. 5-6. For an illustrious example of the ways in which this protein crisis seeped into popular culture, see: Frances Moore Lappé, *Diet for a Small Planet*, New York, Friends of the Earth and Ballantine Books, 1971.

¹⁷*Strategy statement on action to avert the protein crisis*, op. cit., note 14 above, p. 9.

of the responsibility for the PAG, including the provision of "guidelines" for all UN-funded protein-related programmes.¹⁸ The recommendations themselves verged on drastic methods to collect funds for protein projects including a "protein development tax" to be levied on luxury items such as soft drinks, beer and wine.¹⁹ Scrimshaw felt that while the title of the report -- *Strategy statement on action to avert the protein crisis in the developing countries* -- was ridiculed for its catastrophic intimation, the committee broadly agreed that the increases in cereal production through Green Revolution techniques and the accompanying declines in legume production meant that the traditional protein complements for poor peoples' diets were disappearing.²⁰ The committee therefore agreed that all possible sources for protein had to be investigated and countries had to be discouraged from applying advanced agricultural strategies blindly.²¹ In the midst of the debate, Scrimshaw was seen by some colleagues as over-enthusiastically promoting the notion of the protein gap and crisis. Béhar, Scrimshaw's colleague and friend of decades, believed that during the late-1960s and early-1970s Scrimshaw had become so "obsessed" with protein that he had trouble accepting other points of view. According to Béhar, Scrimshaw did not shoot down ideas contrary to his own out of egotism or pride, but rather because of the strength of his beliefs.²² In journals and at conferences, Scrimshaw was seen as an orthodox nutritionist, clinging to a concept whose veracity was partially doubted.

The 1973 Protein Recommendation

From 1970 onward, it seemed that many aspects of protein enthusiasm were becoming increasingly contentious. The head of FAO's Statistics Division, P.V. Sukhatme, disturbed many protein enthusiasts when he collected data showing that

¹⁸Ibid., p. 15.

¹⁹Ibid., p. 17.

²⁰For an excellent overview of this issue, see: Alan Berg, *The Nutrition Factor: Its Role in National Development*, Washington, D.C., The Brookings Institution, 1973, pp. 50-73.

²¹Nevin Scrimshaw, interview, 26 July 1995. The strategy statement was, right up to the final years of the PAG's existence, considered a singularly important document. In the *PAG Compendium*, H. A. B. Parpia, the PAG chairman from 1968 to 1969, cited the PAG's assistance in formulating the statement as a key example of the PAG's contemporary role of providing advice on PCM as one component of development. H. A. B. Parpia, 'Notes on PAG priorities for averting protein-calorie malnutrition', in A. Sachs and P. Cormier (eds), *The PAG Compendium: The Collected Papers Issued by the Protein-Calorie Advisory Group of the United Nations System, 1956-1973*, New York, Worldmark Press, Ltd., E, 1975, xxix-xxvi, on p. xxix.

²²Moisés Béhar, interview, 29 December 1995.

adequate caloric intake would usually take care of the protein.²³ In 1970, Sukhatme was feeling confident in his perspective and wrote to a colleague that he was happy to hear that "most of the big names in the field of nutrition welcome my views."²⁴ In closing, Sukhatme quoted heavily from a letter Autret had received from influential Professor D. M. Hegsted at Harvard School of Public Health. Hegsted reportedly had written:

I think the whole field of protein-calorie malnutrition has been dominated by a very small group for the past 10 or 15 years. They pay lip service to everything but when the cards are down the only thing they push is protein. The PAG is a prime example and, as I have said elsewhere, I think their mission is wrong or they misinterpret their mission. The problem is to do something about malnutrition in infants and children and not necessarily raise protein intake unless it can be shown that this will do the job. The doubters of the usual position need a forum.²⁵

Hegsted's comments were emblematic of the frustration many nutritionists were feeling about the state of nutritional affairs. However, his stance and Sukhatme's were diametrically opposed to Scrimshaw's. Scrimshaw felt that only harm could come from reporting protein requirements at a level lower than optimum. Irrked by Sukhatme's findings, Scrimshaw reported to FAO's Deputy Director-General that he had an extensive experiment running which would support protein crisis plans.²⁶

As Kenneth Carpenter has pointed out, Sukhatme's work was particularly worrisome for protein enthusiasts since they feared that the 1971 ad hoc expert committee on protein and energy requirements would be unduly influenced. In *Protein and Energy*, Carpenter provided a concise synopsis of the committee's periodic tasks and the methodologies used for the 1957, 1965, and 1973 published reports. Each committee used statistical analyses combined with empirical findings to make recommendations about the protein requirements for healthy children and adults. The recommendations were expressed in grams of protein per kilogram of body weight and reflected substantial variability report-to-report.²⁷ The importance of these reports was in part due to their use in calculating the size of the world protein deficit.

²³Kenneth J. Carpenter, *Protein and Energy: A Study of Changing Ideas in Nutrition*, New York, Cambridge University Press, 1994, pp. 189-98.

²⁴P. V. Sukhatme, letter to C. B. Coulson, 20 August 1970, LSHTM Archives, Payne papers, expert committee on protein box.

²⁵Ibid.

²⁶Ibid.

²⁷Carpenter, op. cit., note 23 above, pp. 189-93.

If the requirements espoused were low, then the global protein situation, as calculated by FAO and other expert committees, would be correspondingly better. The 1973 protein recommendations -- in part under Sukhatme's influence -- were the lowest ever proposed by an FAO/WHO committee.²⁸

At the meetings to formulate the 1973 recommendations, caloric issues had, for the first time in decades, been a cause of greater concern than protein. R. Passmore from Scotland noted that the 1965 FAO/WHO Expert Committee recommendations on protein were "difficult reading for experienced nutritionists and nearly impossible for others." Further he noted that due to this confusion, "persons responsible for food planning both at national and international levels" were miffed about what action to take.²⁹ Hegsted continued to rally for increased attention to calories, especially in terms of calorie-protein relationships. In sum, he found that "calorie needs eventually dominate all other needs. The addition of protein to the diet is not useful in overcoming caloric deficits except as an expensive source of calories."³⁰ It was Hegsted's basic contention, grounded in empirical field observations and reports, that "calories spare body protein" and should therefore be prioritized (or at least not overlooked) in the formulation of nutritional requirements.³¹

Although Scrimshaw served on the committee for the 1973 report, he came to believe that the protein levels recommended were too low. During a trial of the recommended levels by Cutberto Garza, a young paediatrician, Garza approached Scrimshaw and mysteriously asked him whether it was an ethical study. He then revealed that in spite of giving the mean recommended protein dose plus two standard deviations, signs of liver damage were appearing as was a loss of lean body mass.³² More importantly, Garza pondered how one could conduct such a test on healthy students who had no parasites or infection when the findings were to be applied to

²⁸*Energy and Protein Requirements, Report of a Joint FAO/WHO Ad Hoc Expert Committee, Rome, 22 March - 2 April 1971*, Rome and Geneva, FAO and WHO, FAO Nutrition Meetings Report Series no. 52, WHO Technical Report Series no. 522, 1973.

²⁹R. Passmore, 'Recommended intakes of protein for growth', paper presented at FAO/WHO Ad Hoc Committee of Experts on Energy and Protein: Requirements and Recommended Intakes, LSHTM Archives, Payne papers, FAO/WHO expert committee on protein box, 28 January 1971, p. 1.

³⁰D. M. Hegsted, 'Protein and Calories', paper presented at FAO/WHO Ad Hoc Committee of Experts on Energy and Protein: Requirements and Recommended Intakes, LSHTM Archives, Payne papers, expert committee on protein box, 8 February 1971, p. 3.

³¹*Ibid.*, p. 1.

³²For the paper which emerged from this work, see: C. Garza, N. S. Scrimshaw, and V. R. Young, 'Human protein requirements: evaluation of the 1973 FAO/WHO safe level of protein intake for young men at high energy intakes', *British Journal of Clinical Nutrition*, 1977, 37, pp. 403-20.

people who were physiologically compromised.³³ This incident fortified Scrimshaw's resolve to have the 1973 recommendations altered.

In a PAG statement entitled "The 'Protein Problem'", the PAG clashed with the protein views of the FAO/WHO ad hoc Expert Committee on Protein and Calorie Requirements. Given Scrimshaw's membership in the committee and his chairmanship of the PAG, the conflict highlighted the deep rifts in the nutritional community. The PAG asserted that the protein levels recommended by the committee were sufficient for healthy children living in a healthy environment but were inadequate for many sick or frequently ill children living in developing countries, a comment not at all contrary to statements in the committee's report.³⁴ Among the WHO committee members who took public offence were A. E. Harper, P. R. Payne, and J. C. Waterlow. In a letter to the *Lancet* they protested what they termed the PAG's "cavalier rejection" of their findings.³⁵ The authors agreed that sick children needed more protein but doubted that children in developing countries "would be less at risk from malnutrition if provided with a different kind of diet with a protein content higher by some unspecified amount than the 'safe level' of protein currently recommended."³⁶

To the authors, protein simply was not the central problem, and the PAG statement served only to sustain "the myth of the 'protein problem' and hence to lend support to the assumption that there are simple and effective interim expedients to alleviate 'protein-energy' malnutrition."³⁷ The authors further lambasted the PAG for taking issue with a recommended protein level since such hype could only "distract

³³Nevin Scrimshaw, interview, 18 July 1995. For a highly critical and detailed analysis of protein requirements and related experiments, see: Nevin S. Scrimshaw, 'Shattuck lecture-strengths and weaknesses of the committee approach, an analysis of past and present recommended dietary allowances for protein in health and disease', *New England Journal of Medicine*, 15 and 22 January 1976, 294, pp. 136-42 and 198-203. See also: Nevin S. Scrimshaw, '1977 W. O. Atwater Memorial Lecture; through a glass darkly: discerning the practical implications of human dietary protein-energy interrelationships', in Philip L. White and Nancy Selvey (eds), *Nutrition in Transition, Proceedings of Western Hemisphere Nutrition Congress V*, Monroe, Wisconsin, American Medical Association, 1978, 14-28, on p. 27. See also: Nevin S. Scrimshaw, 'Through a glass darkly: discerning the practical implications of human dietary protein-energy interrelationships', *Nutrition Reviews*, December 1977, 35(12), pp. 321-337.

³⁴The "Protein Problem", PAG Statement No. 20, 1 March 1973, in A. Sachs and P. Cormier (eds), *The PAG Compendium: The Collected Papers Issued by the Protein-Calorie Advisory Group of the United Nations System, 1956-1973*, New York, Worldmark Press, Ltd., F, 1975, F785-94, on p. F791. See: *Energy and Protein Requirements*, op. cit., note 28 above, p. 9. For a more readable summary of these recommendations as well as proposed levels for other nutrients see: R. Passmore, B. M. Nicol, M. Narayana Rao, G. H. Beaton, and E. M. DeMayer, *Handbook on Human Nutritional Requirements*, Geneva and Rome, WHO and FAO, WHO Monograph Series no. 61, FAO Nutrition Series no. 28, 1974.

³⁵A. E. Harper, P. R. Payne, J. C. Waterlow, 'Human Protein Needs', *Lancet*, 30 June 1973, p. 1518.

³⁶*Ibid.*

³⁷*Ibid.*

attention from the need for a broad-based attack on the social and economic deprivation of which ill-health and malnutrition are but symptoms."³⁸ These words were among the strongest ever written against the PAG in a public forum, and responses rippled through the editorial pages well into the following year.³⁹ Joaquín Cravioto, the new PAG chairman in 1974 and an accomplished nutritionist from the Mexican Institute for Child Welfare, defensively replied that the PAG had drawn as much attention to the socio-economic aetiology of malnutrition as to the role of protein.⁴⁰ While the public debates paint a cloudy picture of these events, they clearly display the underlying truth that Waterlow, Payne, and Harper had more an ideological grudge against the PAG's *raison d'être* than with the criticism of their protein level statement.

The Joint FAO/WHO Expert Committee on Nutrition: Eighth Report

The increasingly stark advocacy for a caloric or hunger-based focus on nutrition quickly spread from the ad hoc protein requirements committee to the Joint FAO/WHO Expert Committee on Nutrition. At their eighth meeting the members focused recommendations solely on food fortification and PCM. Food fortification as a means for improving national nutrition status had been increasingly discussed in nutrition circles.⁴¹ Since the protein crisis had been announced, some nutritionists had optimistically viewed amino acid fortification of cereals, especially with lysine. However, the committee adopted a pragmatic tone in its discussion of such possibilities as well as in its broader discussion of PCM. Whereas two or three years earlier, nutritionists were discussing ways to increase protein intake (regardless of

³⁸Ibid.

³⁹Among others mentioned here, see: M. J. Stock and J. P. W. Rivers, 'Human protein and energy requirements?', *Lancet*, 29 September 1973, pp. 732-33.

⁴⁰Joaquín Cravioto, 'Human protein needs', *Lancet*, 12 January 1974, p. 67. The PAG chairmanship rotated frequently and was the reason for this change of command. One thoughtful follow-up suggested that there was really no difference between the PAG's stand and the expert committee's since both agreed on the need for more protein for many children. A. E. Bender, 'Human protein needs', *Lancet*, 8 September 1973, p. 563.

⁴¹For a complete report on amino acid fortification at this time, see: Nevin S. Scrimshaw and Aaron M. Altschul (eds), *Amino Acid Fortification of Protein Foods, Report of an international conference held at The Massachusetts Institute of Technology 16-18 September 1969*, Cambridge, Massachusetts and London, The MIT Press, 1971. McLaren expressed his disgust at the funds spent on expert committees such as this one and declared that it was "high time for the UN agencies to drop their cavalier attitude towards their responsibility of acting as spokesmen for the world on matters of practical scientific importance." Further, he criticized the format of the meetings since they pushed most writing responsibility onto the chairman and perhaps another person and were therefore not adequately thoughtful or thorough. Donald S. McLaren, letter to the editor, *Nature*, 12 May 1972, 237, p. 119.

caloric intake), now they were suggesting that in populations with low caloric intake "it is uncertain whether there is any benefit to be gained from providing only additional protein or amino acids."⁴² Thus, the committee felt that while most vitamins and minerals could be considered individually, without consideration of the other components of the diet, "protein supply must be judged in relationship to other aspects of the diet, notably, the calorie intake."⁴³ This tone reflected in part the voices of the protein-moderates represented at this meeting by D. M. Hegsted and C. Gopalan among others.

In the committee's discussion of PCM, the advances in protein thought were pronounced. Based on recent work by Bengoa of WHO, the committee members emphasized that "The terms kwashiorkor and nutritional marasmus are of little relevance in field studies, as the number of frank cases of either condition is always small compared with the total number of children who are malnourished by any acceptable criteria."⁴⁴ Further, they noted that there had been "a tendency to over-emphasize the importance of either protein or calorie deficiency alone, whereas in fact the two almost always occur together."⁴⁵ These were remarkable comments because they encouraged a breakdown of the dogmatic nomenclature that had transfixed nutritionists and the hunger-fighting establishment for more than two decades. Historically, in meeting after meeting, experts had sought to clarify and distinguish between kwashiorkor and marasmus. Now, however, their new macro-view focused on malnutrition and frank hunger in the community.

From a field perspective, the committee's decision to emphasize the prevalence of moderate PCM cases was landmark. After decades of concentration on the clinical recognition of PCM, the nutrition establishment was moving back into the field from whence it had come several decades earlier. The committee commented: "Both from the public health and socio-economic points of view, the prevalence of moderate cases of PCM is even more important than is that of severe cases."⁴⁶ Since moderate cases were generally not seen in hospitals and clinics, the committee was demedicalizing the

⁴²Joint FAO/WHO Expert Committee on Nutrition, *Eighth Report*, Geneva and Rome, WHO and FAO, WHO Technical Report Series no. 477, FAO Nutrition Meetings Report Series no. 49, 1971, p. 29.

⁴³Ibid.

⁴⁴Ibid., p. 37. The Committee noted, however, that for clinical purposes it was still important to have categories of PCM, namely kwashiorkor, marasmic kwashiorkor, and nutritional marasmus. (p. 38)

⁴⁵Ibid., p. 51.

⁴⁶Ibid., p. 41.

problem by increasingly enlisting the support of community health workers and other field staff.

Whereas the factors attributed to PCM in the past had strictly related to the quality of the food supply and to the ignorance of the population, this committee highlighted different forces. Accordingly, literacy, the level of change "from a subsistence to a cash economy and from rural to urban living", the chain of food distribution, and specific foods' acceptability were noted to be at the root of PCM.⁴⁷ The committee's commentary invariably had implications for the nutritional programmes that earlier committees had trumpeted. When ignorance had been cited as the central cause of PCM, it had been logical to promote applied nutrition as a means to solve the problem permanently. However, with increasing concern being given to socio-economic indices as a means for identifying malnutrition, new tactics would have to be offered that corresponded to the perceived nature of the problem.⁴⁸ Even in an area that continued to be emphasized -- supplementary feeding for instance -- it was acknowledged that "No good supplementary foods are available in most developing countries".⁴⁹ The campaign which the committee envisaged, at its heart, called for national development plans which accounted for nutrition, not an entirely new approach but certainly one that had not been experimented with to the degree of other projects such as ANPs.

More than any previous report had done, this one commented on the vast chasm between nutritional science and the problems people faced in the field. Further, it highlighted that the arsenal which had been promoted in the war against hunger and malnutrition was inept and ineffective.⁵⁰ This was not to say that it was altogether useless -- the nutritionists still encouraged the increased development and distribution of high-protein supplementary foods -- but rather that current efforts were insufficient and the process by which the enemy to health had been identified would have to change.⁵¹ No longer was kwashiorkor in pre-school children the greatest villain, nor

⁴⁷Ibid., p. 47.

⁴⁸In 1971 Autret was quoted in terms which showed ongoing support for the belief in ignorance being at the root of malnutrition: "Ignorance is the ally of hunger. Together with poverty, which it often accompanies, it is basically responsible for virtually every case of malnutrition." *Food and Nutrition Education in the Primary School, A guide for its introduction*, Rome, FAO, FAO Nutritional Studies no. 25, 1971, p. 9.

⁴⁹*Joint FAO/WHO Expert Committee on Nutrition*, op. cit., note 42 above, p. 55.

⁵⁰The committee noted, "PCM can ultimately be controlled only by general economic and social development and a co-ordinated approach in the fields of agriculture, education, the social services, and public health." Ibid., p. 61.

⁵¹For an excellent analysis of the development and application of protein-rich foods up to this time period see: Elizabeth Orr, *The use of protein-rich foods for the relief of malnutrition in developing countries: an analysis of experience*, London, Tropical Products Institute, August 1972.

was it marasmus. It was the hunger and malnutrition cases that were never seen in the hospitals because the symptoms were not adequately pronounced. The experts called for newer surveys to determine the prevalence of subtler forms of PCM which were often hard to evaluate based on traditional anthropometric techniques. Simple weight-for-age charts might reveal current malnutrition or stunting that resulted from prior malnutrition. Thus, stunted height could be interpreted as evidence for past malnutrition while a low weight-for-height would reflect current malnutrition.⁵²

The journal *Nature* published a negative editorial about the quality of the conclusions presented by the eighth committee's report, calling it a "disappointment" for which the "complexity of the subject is only partially an excuse."⁵³ The author's central argument was that the committee had focused its efforts mainly on short-term measures such as fish protein concentrates which were essentially "stop-gap solutions".⁵⁴ In the fortification arena, the author called plans for cereal food fortification "less effective than they might be because of difficulties of distribution."⁵⁵ Thus, in the minds of some, this committee had not achieved a sufficiently desirable distance from vertical nutrition solutions.

The Decline of Nutrition at FAO

Since FAO's first days, there had been only two directors of the Nutrition Division: Aykroyd and Autret. Each had served as director for over a decade and had been potent, though at times controversial, forces for nutritional programming. Autret, exhausted from his two decades at the agency, eventually retired in October 1971, a few months after the death of John Boyd Orr.⁵⁶ Gopalan had been Autret's choice for successor, but Gopalan felt that he could be far more effective at his current post as the Director-General of the Indian Council of Medical Research. FAO left the post unfilled for a year while engaging in efforts to persuade Gopalan. In the end, Gopalan declined the offer because he "felt that the Division had been truncated to a

⁵² *Joint FAO/WHO Expert Committee on Nutrition*, op. cit., note 42 above, pp. 37-8.

⁵³ 'How to help with protein', *Nature*, 3 March 1972, 236, 1-2, on p. 1.

⁵⁴ *Ibid.*, p. 2.

⁵⁵ *Ibid.*, p. 1.

⁵⁶ It is an apt, though possibly unintended, reflection of nutrition's decline at FAO that none of Ganzin's or the division's files were preserved during his tenure. I obtained the important meeting summary cited in this section from the WHO Archives. 'John Boyd Orr 1880-1971' in *Biographical Memoirs of the Fellows of the Royal Society*, London, The Royal Society, 18, 1972, pp. 43-81.

point of being ineffective."⁵⁷ Eventually, FAO appointed Marcel Ganzin, a long-time FAO nutrition worker.

Ganzin rapidly became frustrated with the ever-decreasing prestige afforded him and his co-workers by their FAO peers. After his first year, he reported to the Director-General and other FAO luminaries that "many of his colleagues still had a tendency to smile at [i.e. do nothing about] or lose interest in the subject of nutrition."⁵⁸ Ganzin believed that staff were unaware of the potential impact nutrition could have in the agency and that nutritionists had failed in "selling 'nutrition'" by providing only an unfavourable portrayal of it and its role.⁵⁹ He listed the failures of the Nutrition Division within the organization and in its inter-agency role. His criticisms were lengthy and included statements that the division had not demonstrated the value of its programmes with concrete evidence and that the solutions offered had been poorly defined and were only partially applicable to the problems they addressed.⁶⁰ In spite of Ganzin's earnest presentation and interests in macro-level problems, the Director-General gave only a lukewarm response to the division's future plans.⁶¹ While the Nutrition Division received a broader mandate, as represented by its name shift to the Food Policy and Nutrition Division, financially there were no alterations. Furthermore, Ganzin would rapidly prove to have less influence and wherewithal than his prominent predecessors.

WHO and Nutrition

Although WHO's relationship with Unicef was generally better than that of FAO with Unicef, Unicef's continuous augmentation of its autonomy and expertise irked and at times enraged WHO administrators during the early-1970s. When one of the Unicef directors from India suggested that Unicef bypass the laborious task of obtaining technical approval from the specialized agencies, WHO staff became incensed. For P. L. Fazzi, WHO's chief medical adviser to Unicef, Unicef was disengaging its *modus operandi* of serving as a support for the technical agencies and was, rather outrageously, continuing joint activities "only of free choice and as an equal partner".⁶² Fazzi found Unicef's moves to be misguided and insupportable due

⁵⁷C. Gopalan, personal correspondence, 2 May 1996.

⁵⁸'Programme and policy advisory board', summary record from meeting on 5 December 1972, 20 December 1972, WHO Archives, box A.0917, p. 1.

⁵⁹*Ibid.*

⁶⁰*Ibid.*, pp. 1-2.

⁶¹*Ibid.*, pp. 2, 8.

⁶²P. L. Fazzi, letter to A. Bellerive, 13 July 1972, WHO Archives, box 1065, folder 12.

to its "traditional" methods and the lack of officers in the field familiar with planning issues.⁶³ Back at WHO headquarters, staff felt that the change would "create an even greater divorce between Unicef and WHO's activities".⁶⁴

WHO's major nutrition work was then being undertaken through its provision of advice to maternal and child health centres, nutrition rehabilitation centres, research, and training.⁶⁵ In WHO's view, the four most significant nutritional diseases as of 1972 were: protein-calorie malnutrition, xerophthalmia, nutritional anaemias, and endemic goitre.⁶⁶ WHO had conducted substantive surveys of PCM prevalence and had found that world-wide, severe PCM could be found in up to 7.6% of children under five and that moderate PCM could be detected in up to 43.1%.⁶⁷ Based on these figures, Bengoa conservatively estimated that 11 million children suffered from severe PCM and 76 million from moderate PCM. WHO believed that the severe cases could well be treated during the decade since they were easily identified and were frequently reached by medical aid. The children suffering from moderate and chronic malnutrition could only be served by general improvements in socio-economic status and national food and nutrition policies.⁶⁸

Finances

Unicef and FAO were hardly alone in their relatively small expenditures for nutrition-related activities. In 1972 evaluators highlighted a substantial decline in WHO nutrition operations. Their report noted that between 1956 and 1970, although net nutrition expenditures had increased, the percentage of WHO's budget dedicated to nutrition had declined substantially. Whereas in 1956 overall nutrition operations commanded 3.4% of the total WHO budget, in 1970 that figure had declined to

⁶³Fazzi believed that WHO could preserve its "leadership over Unicef" by maintaining close ties at a country level. Ibid.

⁶⁴Chief CPD, letter to Director, LEG, 24 August 1972 WHO Archives, box 1065, folder 12.

⁶⁵For a thorough discussion of the WHO nutrition research programme, see 'Nutrition: a review of the WHO programme-2', *WHO Chronicle*, May 1972, 26(5), 195-206, on pp. 198-202.

⁶⁶'Nutrition: a review of the WHO programme-1', *WHO Chronicle*, April 1972, 26(4), 160-179, on p. 160.

⁶⁷Ibid., p. 161. Although these figures were commonly cited, they were not necessarily reasonable indicators for calculating global PCM prevalence. The figures presented were culled from several surveys and reflected astronomical ranges. The lower estimates of prevalence given for severe and moderate PCM were .5% and 4.4% respectively. FAO noted in the same year that there was no mechanism to accurately report the number of hungry or malnourished people on the planet. 'Programme and policy advisory board', op. cit., note 58 above, p. 5.

⁶⁸J. M. Bengoa, 'Statement to the Unicef Executive Board', 1972, Unicef Archives, CFNYHQ-05ANS-001.

1.8%.⁶⁹ In the field, however, when INCAP support was included in the calculation, nutrition spending as a percentage of the budget had increased from 2.0% to 4.0%.⁷⁰ Thus, WHO was spending roughly 6% of its total budget on nutrition activities in 1970.⁷¹ For its plans in 1974, WHO intended to fund five professional full-time positions in the Nutrition Unit, including two programme development specialists, one liaison to country programmes, and other liaisons to WHO units and other agencies.⁷² As mentioned in the introduction to the dissertation, determination of nutrition expenditures is a naturally imprecise task. Estimates of agency spending conducted by other agencies can be enlightening since in-house estimates naturally are biased. The World Bank estimated that WHO's specific nutrition activities in 1973 were \$1.4 million or 1.5% of WHO expenditures.⁷³ According to the Bank, roughly fifty staff people were working in this area.⁷⁴ PAHO devoted \$3.3 million of its budget to nutrition which represented 7.5% of its budgetary expenditures in 1973.⁷⁵ According to the Bank, PAHO had ninety staff members at work in nutrition.⁷⁶ Evidently, no one envisaged WHO programmes to have global impact when the central staff consisted of so few personnel. The evaluators criticized WHO for its low financial support for nutrition and noted with disappointment that the Unit had the same number of professionals as it had in 1958.⁷⁷

While enthusiasm for nutrition had dipped in the 1970s, it is surprising to note that the World Food Programme (WFP) in 1971 intended to give aid in the form of food and services worth \$130 million. This figure contrasts starkly with the roughly \$4 million WHO allocated annually to nutrition, \$7 million from Unicef, and \$3 million

⁶⁹G. H. Beaton, V. Ramalingaswami, N. S. Scrimshaw, 'Report of a meeting of consultants on the nutrition programme of WHO', Geneva, 2-8 July 1972, document number R73-247, Bengoa personal collection, p. 20.

⁷⁰Ibid.

⁷¹These figures are not simply estimates of spending for the Nutrition Unit itself, but rather, reportedly encompass total funds spent on nutrition activities. After 1967, the WHO Nutrition Section was referred to as the WHO Nutrition Unit. Ibid.

⁷²Ibid., p. 15.

⁷³The World Bank's full name is the International Bank for Reconstruction and Development (IBRD). I will use the terminology in common usage today by referring to it simply as the World Bank or the Bank.

⁷⁴'Sector program paper: nutrition policy', 31 October 1973, document number R73-247, for Executive Directors' Meeting of International Bank for Reconstruction and Development, LSHTM Archives, World Bank box, p. 8.

⁷⁵Ibid.

⁷⁶Ibid.

⁷⁷The consultants believed that "modest" budgetary increases would result in major accomplishments. G. H. Beaton et. al., op. cit., note 69 above, p. 17.

from FAO.⁷⁸ This comparison is not meant to imply that WFP was funding more nutrition programmes than these other agencies since its primary goal was general development through food incentives. The juxtaposition simply illustrates that a programme started in 1963 could generate more interest and goods for distribution than nutrition could at WHO, FAO, and Unicef. Overall interest in the 1970s in nutrition was remarkably low when contrasted with other activities. The World Bank, while considering its role in nutritional issues, estimated that the total spent annually on nutrition by UN and bilateral agencies amounted to \$20 million and was mostly in the form of research projects and technical assistance.⁷⁹

Applied Nutrition: Just Have Faith

In the 1970s, ANPs were seen at best as the bedrock of national nutrition plans, and at worst as utter failures.⁸⁰ For Unicef, ANPs had, except in the rare cases of Colombia and perhaps India, never borne the fruit that had been anxiously awaited since the programmes were initiated during the end of the 1950s. In 1971, Unicef concluded that based on evaluations of its ANPs, "the basic concept was correct but the strategy and tactics need to be improved."⁸¹ In particular, Unicef urged the incorporation of ANPs into rural development projects which utilized well-trained personnel and had appropriate goals for the local population.⁸² After conducting assessments during 1971 and 1972, Unicef's Executive Board determined that all aspects of the projects required improvements which necessitated "Perseverance and some degree of patience" on everyone's part.⁸³ Among the plethora of problems which plagued the projects, the chief concern was the ineffectiveness of the programmes to elicit community support and participation.⁸⁴ A year later, in meetings with FAO, the two agencies expressed a "general feeling that many ANP[s] have failed

⁷⁸See Burhan Ilıcil, 'Unicef Program Statistics, 1947-1979', November 1985, New York, Unicef Archives, CF/HIST/IC-85-3; 'Nutrition: a review of the WHO programme-1', op. cit., note 66 above, pp. 175, 178; and 'Sector program paper', op. cit., note 74 above, p. 8.

⁷⁹This figure did not include the value of food aid. 'Sector program paper', op. cit., note 74 above, p. i.

⁸⁰See, for example: Roberto Rueda-Williamson, 'The applied nutrition program, the basis of the national nutrition plan', translation from *Boletín de la Oficina Sanitaria Panamericana*, March 1970, Unicef Archives, CF-NYHQ-05ANS-005. See also: Michael C. Latham, *Planning and Evaluation of Applied Nutrition Programmes*, Rome, FAO, FAO Nutritional Studies no. 26, 1972.

⁸¹'Unicef assistance in foods and nutrition', 26 April 1971, Unicef Archives, 88R025, box T-006, Teply files, annexure II, p. 5.

⁸²Ibid.

⁸³'Report of the Executive Board', April-May 1972, E/ICEF/624, paragraph 38.

⁸⁴Ibid. See also: 'Report of the Executive Board', April-May 1973, E/ICEF/629, paragraph 62.

to achieve the expected results, although the number that have actually been evaluated in depth is small."⁸⁵ The agencies agreed to conduct broader assessments of the projects and to determine the "minimal amount of information" required for conducting an ANP.⁸⁶

In South East Asia, Dr. Ken Bailey had been working on applied nutrition for WHO for several years. As Bailey watched the rise of food and nutrition planning, he noticed that ANPs had a difficult time commanding top governmental attention. Bailey stated: "I think the ANP approach had a hard time to reach a policy level, because it was counted so squarely in the education sector, so that didn't bring it out as a national development issue".⁸⁷ In 1974, Labouisse weakly suggested to the Executive Board that in spite of past deficiencies, Unicef should continue its support to ANPs with special attention given to means for expanding home production of protective foods for children.⁸⁸ That same year, Scrimshaw published one of his more philosophical and reasoned treatises on public health issues entitled, 'Myths and Realities in International Health Planning'. Among the projects he attacked, ANPs were high on the list since they conformed to the myth that "a program is justified by good intentions."⁸⁹ ANPs, in his mind, were well-intentioned programmes meant to reach most people but which in most cases had amounted to only pilot projects. Scrimshaw cursed ANPs as all the worse since, although they rarely advanced and expanded to reach ever greater numbers of people, they gave "the false impression that the problem is being solved."⁹⁰ Although such astute negativity could not be found in the statements of FAO, WHO, and Unicef administrators, the notion that ANPs were failing was leading to a gradual recession of ANP funds.

In spite of the abundance of derogatory remarks made during this time about ANPs, a few well-positioned administrators continued to believe that they were the best long-term solution to many hunger and malnutrition concerns. Peter Greaves, then a FAO officer working for Unicef in New Delhi, was closely involved in Unicef's ANP in India.⁹¹ The programme there fell under heavy criticism during the early-

⁸⁵Charles A. Egger, 'Minutes of FAO/Unicef inter-secretariat meeting held at FAO headquarters, Rome, 8-10 November 1972', 5 April 1973, WHO Archives, box 1066, p. 6.

⁸⁶Ibid..

⁸⁷Ken Bailey, interview, 1 April 1996.

⁸⁸Henry R. Labouisse, 'General Progress Report of the Executive Director, child malnutrition in the developing countries', 17 March 1969, E/ICEF/586/Add.9, p. 18.

⁸⁹Nevin S. Scrimshaw, 'Myths and realities in international health planning', *American Journal of Public Health*, 1974, 64(8), pp. 792-98, on p. 796.

⁹⁰Ibid., p. 797.

⁹¹J. Peter Greaves, 'Curriculum Vitae', 1994, Greaves personal collection.

1970s, and in 1973 and 1974 Greaves fought for a well-funded renewal of a broad-based ANP there. Although he found most of the Unicef staff to be supportive and enthusiastic, he was anxious to see "people with their fingers dirty and not writing reams of paper."⁹² The proposed ANP, to be co-ordinated with the Government of India's fifth five-year plan for development, sought to link child health services, nutrition education, and community and family gardening in order to produce long-term tangible results.⁹³ Gopalan, who was then the Director of India's National Institute of Nutrition in Hyderabad, was impressed with the proposal. While past ANPs had failed due to low participation of health services and the use of imported supplementary foods, this project, Gopalan believed, was substantively better planned.⁹⁴ Greaves and his colleagues explained to Unicef headquarters that the project should be funded only if it were financed fully; any funds short of the ideal could be put to better use on other projects. The ANP team presented the issue in the following manner to Unicef:

There are two major needs of this country that we are going some way to meet, and on which we could easily spend substantially more money: on the one hand, the provision of potable water and, on the other, the training of basic health workers...To the extent that the satisfaction of these needs is held back by lack of resources, of buildings, of stipends, of equipment, Unicef might direct more of its funds to meeting them -- something specific, something that can be readily measured -- rather than chasing the seeming will-o'-wisp that is ANP, which aims at something far more fundamental, of far greater long term significance: namely, changes in the way that people respond to their environment in relation to the foods that they grow and prepare and consume and feed to their young children.⁹⁵

In their final, passionate call for ANP support, the team waxed philosophical:

If we want to go in that direction [ANP support], and we strongly feel we should, then we must be bold and flexible and...have faith. If we want to go in that direction, we cannot insist on straitjacketing the enterprise by defining precisely in advance exactly what is done, where,

⁹²J. P. Greaves, interview, 8 December 1995.

⁹³The planning commission of the Government of India designed the fifth five-year plan. J. P. Greaves, interview, 9 May 1996.

⁹⁴Excerpts from letter from Dr. C. Gopalan', 18 September 1973, in 'Explanatory memorandum to the recommendation: Applied Nutrition Programme (ANP)', 1973/1974, Greaves personal collection, annex 3.

⁹⁵Explanatory memorandum to the recommendation: Applied Nutrition Programme (ANP)', 1973/1974, Greaves personal collection, pp. 9-10.

and when: were we to do so we should stifle initiative; we should fail in our objective; we should achieve nothing.⁹⁶

In the final analysis, faith alone was enough to drive financial support for India's ANP initiative, but not for future projects. Although this ANP received full funding, devastating problems with implementation rapidly led to its failure.⁹⁷ The lesson learned for the agencies was that tangible impact was a far more desirable objective for the donors whose funds were constrained and had to demonstrate progress annually. Nevertheless, for Greaves this period marked a shift for the nature of Unicef's assistance; Unicef was moving away from the "supply side" of assistance which had called for food, medication, and equipment, and toward the "idea side" which involved planning, working with governments, and crafting solutions.⁹⁸ Paul Lunven, later a director of FAO's Food Policy and Nutrition Division, worked for FAO in Central America when ANPs were popular. He believes that ANPs were a great idea and that the problem was that too few were planned, and they were commercially unviable. In his view, they were not a failure, because when administrators realized that ANP stopped functioning when the aid agency pulled out its resources, they were inspired to consider nutrition planning and to head to the top of the political hierarchies.⁹⁹

National Nutrition Planning: An Idea Whose Time Had Come

Looking back in 1969 on the previous 20 years of child nutrition work, the Unicef Board recapitulated its activities from milk distribution to high-protein food mixtures. Still resonating with words from Bellagio, it suggested that its latest realization was that "the complex problem of child malnutrition is best approached from a broad base and within national development plans."¹⁰⁰ The level of discussion on national child nutrition policies moved up considerably during the first years of the decade. MIT hosted a conference on 'Nutrition, National Development, and Planning' in 1971 to promote further the notion of making nutrition a key factor in the planning of developing economies.¹⁰¹ Unicef was following such proceedings closely and

⁹⁶Ibid., p. 10.

⁹⁷J. P. Greaves, interview, 9 May 1996.

⁹⁸J. P. Greaves, interview, 8 December 1995.

⁹⁹Paul Lunven, interview, 27 March 1996.

¹⁰⁰Labouisse, 'General Progress Report of the Executive Director', op. cit., note 88 above, p. 23.

¹⁰¹For the papers presented at this conference, see: Alan Berg, Nevin S. Scrimshaw, David L. Call (eds), *Nutrition, National Development, and Planning*, Cambridge, Massachusetts and London, The MIT Press, 1973.

spearheading efforts for national nutrition plans. The Unicef Board had lamented that it spent only about 13.5% of its programme assistance on childhood nutrition projects in spite of consensus that nutrition should rank higher.¹⁰² The central question from the perspective of administrators was no longer whether national planning had to incorporate nutrition, for this had been shown, but rather how nutrition could be prioritized in national planning to take a more prominent role.¹⁰³ The Board noted that there was no single solution which could be used in all countries; each nation had to design a national policy and programme of work for itself. Taking a substantially less pro-active approach, the Board suggested that "Unicef should be ready to assist in more limited measures to combat child malnutrition, beginning where the countries are ready to act [with a national programme and policy]."¹⁰⁴ Unicef had concluded that national nutrition planning was a far more effective approach to nutritional improvement than past endeavours in supplementary feeding and milk conservation.¹⁰⁵ There were few examples of successful national nutrition planning though India had recently strived to include human nutrition improvements in its framework for food and agricultural policies.¹⁰⁶ Nevertheless, Unicef felt that historically, policy makers had concerned themselves with nutrition only during catastrophes and had otherwise disregarded it.

FAO, too, became very interested in national planning approaches to nutritional problems. Along with Unicef and to a lesser degree WHO, it promoted government plans to integrate nutrition planning into every government department -- health, agriculture, economics and labour included. In retrospect, Béhar, who was becoming increasingly connected to WHO, believed that these attempts were absurd manifestations of the inflated sense of self-importance the nutritionists had. Béhar mocked their efforts, which included his own:

We were expecting that each government, all the different departments...would sit around and discuss how to solve nutrition problems of the country. It was absolutely ridiculous; we were expecting high officials to plan for the nutrition of the people and it was done with good intentions and that was the time when FAO was the

¹⁰²'Improvement of child nutrition, note prepared by Unicef secretariat for session of the protein panel', New York, 3-7 May 1971, Unicef Archives, CF-NYHQ-05ANS-005. According to a report by the World Bank, as of 1972 Unicef nutrition expenditures totalled \$5 million or 10% of total budgetary expenditures. 'Sector program paper', op. cit., note 74 above, p. 8.

¹⁰³'Improvement of child nutrition', op. cit., note 102 above.

¹⁰⁴Labouisse, 'General Progress Report of the Executive Director', op. cit., note 88 above, p. 23.

¹⁰⁵'General Progress Report', March 1970, E/ICEF/602, p. 32.

¹⁰⁶*Ibid.*

main mover but WHO and everyone...went along and we were trying to centre the development on nutritional goals...I remember sessions with officials of the governments discussing...the goals of nutrition [they pointed to] 1st food production, 2nd education...[and then to] health.¹⁰⁷

Thus, broad analyses of data only illuminated that developing nations had to develop in every respect, not necessarily through nutritional means. Béhar continued, "We felt that governments have to have more interest in nutrition. We were too close-minded without understanding the politics...I mean the political nature and the limitations and the possibilities of the governments...I always had some doubts because it was obvious that **everything** has to be done to improve nutrition." (emphasis his)¹⁰⁸

Although some suggest that national nutrition plans were built on ANPs, the record insinuates that a less positive linear route led to the emergence of national nutrition policies. When Unicef and other agencies saw ANPs floundering, they began to conclude that national nutrition planning was their only hope for nutritional progress. The Unicef Executive Board documentation supports this interpretation. Through the early-1970s, the Board annually lamented the low (and declining) support afforded nutrition programmes. Having noted the ineffectiveness of many nutrition ventures, the Board increasingly spoke of the need for national nutrition policies as the essential backdrop for all nutrition undertakings.¹⁰⁹ Within FAO, Greaves was a visible proponent for nutrition planning and frequently vocalized structural arrangements for implementation. In his view, a national policy as well as some type of national nutrition committee was needed in each country to co-ordinate all departments of the government in their nutrition efforts. He envisaged a nutritionist or a person versed in nutrition issues working within the ministries and advising on the technical expertise requirements. He asserted that unfortunately, the nutritionist was frequently "A man occupying a room at the end of a corridor, who is never consulted or whose advice is ignored".¹¹⁰ Greaves articulated the new role of nutrition in the 1970s as more a "point of view" than as an academic discipline.¹¹¹ To him, "nutrition"

¹⁰⁷Moisés Béhar, interview, 29 December 1995.

¹⁰⁸Ibid.

¹⁰⁹Annual reports from the Executive Board reflect this perspective clearly and consistently. See, for example: 'Report of the Unicef Executive Board', New York, April 1971, E/ICEF/612, paragraphs 85-89; 'Report of the Unicef Executive Board', op. cit., note 83 above, paragraphs 31, 39; 'Report of the Unicef Executive Board', op. cit., note 84 above, paragraphs 55, 56, 60.

¹¹⁰J. P. Greaves, 'Organizational structures for the improvement of nutrition', *FAO Nutrition Newsletter*, 8(4), 1970, pp. 6-9, on p. 7.

¹¹¹J. P. Greaves, 'The need for trained personnel', *FAO Nutrition Newsletter*, 1970, 8(3), 22-26, on p. 22.

may be thought of as a particular torch, which illuminates in a special way the subjects on which it is shone", and the nutritionist maintained a priority position in planning and nutrition in general.¹¹² If the linkages of nutrition to other fields such as sociology, anthropology, and psychology were viewed as a "spider's web", then, according to Greaves, "maybe the 'nutritionist' is the spider."¹¹³ These comments shed considerable light on the self-created new view nutritionists had of themselves. They believed that they were the focal point of developments in several disciplines -- a view illustrated by the expansion of expertise within the PAG. This high opinion of self was, however, to catalyse serious repercussions since it had been the policy makers who had seen themselves at the centre of nutrition-related disciplines. In the making was an identity crisis which would ultimately demonstrate to the nutritionists that they were not at the centre of the world's development activities. In the following chapter, the ramifications of this shift will become apparent.

Unicef's foray into national nutrition policies was accompanied by substantial support for these measures from FAO. At his new post as director of the Food Policy and Nutrition Division, Ganzin refocused FAO's nutritional interest on nutrition and national planning. In 1972, Ganzin told Unicef that nutrition programmes had failed due to bad baseline data and because poor people did not reap the benefits of improved national food production.¹¹⁴ Further, he stressed the need for more surveys (perhaps in part financed by Unicef) to aid in the design of nutritional interventions.¹¹⁵ Discussions between FAO and Unicef during January 1973 revealed the canyon between the two agencies' views of frameworks for national planning. FAO presented Unicef with a flow chart which described two main policy approaches: one embedded in national development policy and the other located in nutrition intervention programmes. The fundamental problem Unicef had with the plans was that it could not conceive of the least developed countries having the funds or infrastructure for nutrition policy in their national development plans. Unicef estimated that the data collection alone would cost \$300,000 - \$1,000,000. Given its scarce resources, Unicef therefore could not hope to address FAO's sophisticated policy plans but nonetheless sought a role in the planning of nutrition policies for nutrition

¹¹²Ibid.

¹¹³Ibid.

¹¹⁴Charles A. Egger, *op. cit.*, note 85 above, p. 4.

¹¹⁵Ibid., pp. 4-5.

interventions. The nuts and bolts of realizing national plans were beyond Unicef's reach.¹¹⁶

The FAO Conference meeting during the end of 1973 reflected the swing of nutrition interests toward planning. The Conference agreed that the most important nutrition venture for the Food Policy and Nutrition Division was to assist countries in their formulation of national food and nutrition policies and to follow-up these policies with appropriate technical expertise. With this in mind, the Conference agreed to a reorientation of FAO nutrition work with a primary concentration on building these national policies. Few other nutrition issues of import were discussed.¹¹⁷ FAO believed that such changes were necessary since staff had realized that applied nutrition and food production alone would not solve malnutrition and that an integrated approach was required. For those whose optimism was unaffected by the scope of the problem, the Conference had the following advice: "The problem [of malnutrition] is too vast and complex to permit a solution within a 10-year period. It would therefore give rise to unwarranted expectations if FAO were to launch a 10-year 'plan'".¹¹⁸ The days of dreaming about a rapid solution to hunger and malnutrition, at least at FAO, had passed. The nutritional language of kwashiorkor, marasmus, protein, and calories was widely foregone for the language of politics and policy planning.¹¹⁹

Like FAO, Unicef believed that the delay in making massive nutritional breakthroughs rose from the failure of nations to prioritize nutrition. In 1971, however, Unicef was encouraged by "signs of increasing receptivity" from governments which suggested that "there may be better payoffs for efforts along this line in the future."¹²⁰ In order to facilitate governmental interest in nutrition plans, Unicef along with FAO and WHO were organizing seminars to inform Ministers from Africa and Latin America about general food and nutrition issues.¹²¹ Underlining the failure of so many past nutrition programmes, Unicef recommended that in the

¹¹⁶Charles Egger, 'Note for the record: discussion with Dr. Ganzin on proposals for the development of national food and nutrition policies', 16-19 January 1973, WHO Archives, box A.0917.

¹¹⁷*Report of the Conference of FAO, Seventeenth Session*, Rome, FAO, 10-29 November 1973, pp. 51-53.

¹¹⁸'Toward a new strategy for improving nutrition', in *Report of the Conference of FAO, Seventeenth Session*, Rome, FAO, 10-29 November 1973, November 1973, item 12 (b), p. 1. Ironically, the World Food Council in 1975 would launch a ten-year goal for ending hunger and malnutrition.

¹¹⁹Even in the United States, interest in domestic nutrition policies were receiving serious attention, as shown in *U. S. Nutrition Policies in the Seventies*, by noted nutritionist and Unicef consultant, Jean Mayer. Jean Mayer (ed), *U.S. Nutrition Policies in the Seventies*, San Francisco, W. H. Freeman and Company, 1973.

¹²⁰'Unicef assistance in foods and nutrition', op. cit., note 81 above, p. 3.

¹²¹*Ibid.*

promotion of national nutrition activities, it might behoove facilitators to insert nutrition into existing activities without giving nutrition a "high profile" since this could discourage administrators who have "in mind previous ill-conceived and ill-fated attempts to mount special nutrition projects" and who might "shy away from anything associated with the word 'nutrition'."¹²² At least in the mind of Unicef administrators, "nutrition" had gotten a bad reputation during the previous decades of unsuccessful nutrition projects. These attitudes coloured an important part of the matrix of national nutrition planning: nutrition was to be a **part** of development, not an end in itself. By constantly pointing out the economic and educational gains that could be made through nutrition efforts, administrators at the agencies hoped to defuse fears that nutrition projects would require already scarce funds and personnel and then go on to accomplish nothing substantive.

The promotion of nutrition planning was exceedingly difficult during the decade following Bellagio. John Grun, a native of the Netherlands, was in India working as the Deputy Director for Unicef in South-Central Asia during the early-1970s. He initially found the business of planning to be beyond the reach of most Unicef personnel: "to a majority of people at Unicef, the idea of planning, and the whole concept of the skill, or the art of planning...came as something new. Very few of us were familiar with it, and only a few of us were trained to it academically and therefore very few of us were confident in it. I suffered from that very much."¹²³ For Grun and his counterparts in developing countries, the act of "selling" the role of nutrition in national development was often awkward and unsuccessful. Many of these developing countries already had planning ministries that were looking at numerous indicators to track socio-economic progress and enable future growth. When Unicef and FAO began their attempts to integrate nutrition into the planners' work, the planners initially greeted these overtures sceptically. In India progress was especially difficult since, according to Grun, the planners had justifiably "very high opinions of themselves" and asked people like Grun, "What have you got to bring [to planning endeavours]?"¹²⁴

In spite of the inexperience of staff, there was a flurry of programmes designed to train economists and economic-agriculturists from developing countries in nutritional issues. The tangible difference between these activities and their predecessors was that Unicef, FAO, and WHO were striving to target higher level

¹²²Ibid., p. 4.

¹²³John Grun, interview conducted by Herman Stein, 12 December 1983, Unicef Archives, interview file, p. 28.

¹²⁴Ibid., p. 29.

government officials who wielded greater influence in policy. A typical food and nutrition policy training programme designed for a few dozen personnel cost the agencies \$170,000.¹²⁵ The diminutive stature of the initial food and nutrition policy projects contributed to their tarnished image among governments. In India, Grun cultivated an important relationship with the Minister of Finance who was even more powerful in national planning than the planners. When Grun eventually met with him one-on-one, the Minister did not embrace his ideas because they were not sufficiently grand. The Minister reportedly told Grun: "if you're talking about anything less than \$20 million, I'm not interested...I love children just as much as you do...but those are the facts. Anything less makes no real difference."¹²⁶ This prejudice characterised the interactions between nutrition planners and the politicians; UN agency staff did not yet have the tools to promote the massive programmes that might have been accepted by the politicians. To many, this was the area where Unicef was weakest: garnering superlative political support. Grun remarked that their first planning lessons demonstrated that "if you have the planners on your side, you still won't get very far without the politicians."¹²⁷

Since the Bellagio Conference of 1964, Unicef had been working avidly to spearhead efforts on food and nutrition policy. Although FAO relations with Unicef had been generally good since then, WHO was not pleased with Unicef's assertive behaviour. During preliminary work on a multi-agency UNDP-proposed regional food and nutrition policy project for the American region, Unicef put itself forward as the executing agency as well as project manager. Although FAO expressed no reservations, WHO administrators were extremely concerned since Unicef did not officially have the appropriate technical expertise and the move would mark a departure from UN policy. In the past, only technical agencies served as project executors for UNDP projects.¹²⁸ At WHO's Nutrition Unit, Bengoa suggested that WHO/PAHO step up and take control of the project and leave Unicef with responsibility for "administrative co-ordination, or any other term which would be acceptable to UNDP and Unicef."¹²⁹ In this case, WHO successfully asserted that FAO and WHO had the responsibility for formulating food and nutrition policies on a

¹²⁵Henry R. Labouisse, 'Recommendation of the Executive Director for assistance: Interregional food and nutrition training', 2 March 1971, E/ICEF/P/L.1462, p. 1.

¹²⁶Grun, *op. cit.*, note 123 above, pp. 29-30.

¹²⁷*Ibid.*, p. 35.

¹²⁸P. L. Fazzi, letter to A. Bellerive on American region, food and nutrition policy, 26 March 1974, WHO Archives, box A.0921.

¹²⁹J. M. Bengoa, letter to A. Bellerive on American region, food and nutrition policy, 4 April 1974, WHO Archives, box A.0921.

country level.¹³⁰ The precise shape of these policies remained elusive and inspired publications and discussions seeking to flesh out action.

Alan Berg, a senior fellow at the Brookings Institute, published an influential book on the subject in 1973. He asserted that the days of looking at nutritional problems in a medicalized context were gone, as these approaches had been too limited in their scope. Further, he lamented that although the UN agencies had lured attention to hunger issues, "they have not been able to mobilize a serious attack on malnutrition."¹³¹ Berg suggested a "macronutritional" bearing that would inform governments and motivate them to take sweeping action that would reach more people in need.¹³² By integrating nutrition into national development schemes with solid commitment, Berg felt progress could be made. At the very least, he asserted that it was "no longer sufficient to think of nutrition in terms of projects that are doing something good or useful; they must be aimed at doing something of consequence."¹³³ In spite of the interest in producing results, few could point to tangible examples of success or formulae for achieving it. Béhar, in retrospect, believes that the original ideas about national nutrition planning were "pretentious" and that the nutritionists were overly influenced by the "great minds" such as Berg. In basic terms, Béhar feels that the plans for nutrition planning in development implied that many problems in a country were going to be solved "just by improving nutrition". In the end, the nutrition planners "overestimated their own voice" as they tried to convince agriculturists, economists, and politicians to focus on nutrition.¹³⁴ Margaret Gaan, Unicef's deputy regional director in Bangkok between 1970 and 1974, would concur with Béhar. While she thought that national planning was a smart idea, she believed that ultimately the results were "a lot of words and piety, a lot of good intentions, and very, very little actual money budgeted into national plans for children."¹³⁵ In the next

¹³⁰Director, COR, letter to P. L. Fazzi (WHO chief medical adviser to Unicef) on American region food and nutrition policy, 12 June 1974, WHO Archives, box A.0921.

¹³¹Berg, *op. cit.*, note 20 above, p. 3.

¹³²*Ibid.*, p. 8.

¹³³*Ibid.*, p. 210. For a particularly critical examination of Berg's central ideology, see: Peter Hakim and Giorgio Solimano, 'Nutrition and national development: establishing the connection', Cambridge, Massachusetts, MIT Center for International Studies, MIT International Nutrition Planning Program discussion paper no. 5, C/75-18, July 1975. Hakim and Solimano essentially argued that national nutrition planning was "based on the faulty presumption that increasing a person's capacity or potential will necessarily result in a growth in both his and his country's productivity." (p. 4)

¹³⁴Moisés Béhar interview, 29 December 1995.

¹³⁵Margaret Gaan, interview conducted by John Charnow, 21 November 1983, Unicef Archives, interview file, p. 13.

chapter, we will see the complex, and ultimately unsuccessful, course one school of nutritional planners took during the mid-1970s.

The World Food Conference

Perhaps the greatest force which pushed administrators and scientists alike away from their protein myopia was the growing concern during the early-1970s that a world food crisis was approaching. In 1972, bad weather caused world food production to dip for the first time since the W.W.II. As a result, demand for imports from the major food exporters, especially in the developing countries, was elevated and food stocks consequently were depleted. Prices rose as the oil crisis of 1973 further exacerbated prospects for stability, and countries focused their efforts on boosting food production to compensate for the losses of 1972. During the next three years, world food supplies remained depleted and precariously dependent on each year's production.¹³⁶ In his 1974 progress report to the Board, Labouisse distressingly noted that Unicef "should be preparing not only for famines recognized as such, but for a widespread deterioration of nutrition among young children of lower income families."¹³⁷ Against this foreboding backdrop of a catastrophe-in-waiting, the UN called the World Food Conference to address the situation. In the preparation for the conference, various agencies and factions competed to have their methodologies adopted for dealing with the crisis. Unicef and FAO, among others, advocated national food and nutrition policies as the most effective long-term approach. According to a preparatory document for the conference written by UN agency representatives, a food and nutrition policy could be defined as follows:

a complex of educational, economic, technical and legislative measures designed to reconcile at a level judged feasible by the planner, projected food demand, forecast food supply and nutritional requirements. These measures are not only of economic but also of social import. They are directed at remedying distortions detrimental to the public interest

¹³⁶*Report of the World Food Conference*, op. cit., note 1 above, p. 32. For an excellent description of the various forces at work in this food crisis see: N. S. Scrimshaw, 'The world-wide confrontation of population and food supply', *Technology Review*, 1974, 77(2), pp. 12-19. Reflecting the increasing interaction between nutrition and other disciplines which grew out of this crisis, Sol Chafkin of the Ford Foundation and Alan Berg of the World Bank, presented a paper entitled 'The influence of international financial problems on food and nutrition' at the Western Hemisphere Congress IV. Sol Chafkin and Alan Berg, 'The influence of international financial problems on food and nutrition' in Philip L. White and Nancy Selvey (eds), *Proceedings of Western Hemisphere Nutrition Congress IV*, Acton, Massachusetts, Publishing Sciences Group, Inc., 1975, pp. 10-15.

¹³⁷Henry R. Labouisse, 'Unicef General Progress Report of the Executive Director', New York, United Nations, 1974, E/ICEF/632, p. 14.

between what the consumer desires, what he can obtain and what he needs physiologically.¹³⁸

In the authors' view, these food and nutrition policies would be co-ordinated with specific time-sensitive goals. As an example, they suggested that if the poorest 20% of the population had a daily caloric intake of 1,500 calories and the 20% just above them had an intake of 1,900 calories, then a plausible goal would be to have the poorest reach the 1,900 calorie benchmark within a specified number of years.¹³⁹ Thus, food and nutrition policies intended to produce real changes in nutritional status were based in part on broad measures of nutritional status.

Protein, marasmus, and kwashiorkor were terms conspicuously neglected in the proceedings. This may in part have been a reflection of the late opportunities afforded the PAG for conference input and representation. By June 1974, PAG members were astonished to learn they had not been consulted in preparation for the upcoming World Food Conference.¹⁴⁰ After a few high level contacts between the PAG and UN agencies, the PAG was included in conference proceedings. By August 1974, PAG ideas had been solicited, and by October they received an invitation.¹⁴¹ Although conference organizers had probably excluded the PAG for fear of changing the emphasis of the conference to protein, the eventual PAG conference statement scarcely mentioned protein problems and focused instead on policy and programmatic issues.¹⁴²

Although preparatory groups emphatically promoted food and nutrition policies, the participating experts also acknowledged the painfully slow progress made in this area during the previous decade. Substantial efforts on the part of FAO and Unicef in particular had yielded a handful of written policies, but practically none had been implemented. The conference participants therefore called for a more "dynamic" and polished diplomacy in the promotion of these policies which on a national level would be supported by an all-encompassing administrative structure to monitor progress.¹⁴³ The World Food Conference in the end emphasized food planning and

¹³⁸'National Food and Nutrition Policies', in *The World Food Problem: proposals for national and international action*, August 1974, item 9 of the provisional agenda, E/CONF. 65/4, paragraph 457.

¹³⁹*Ibid.*, paragraph 466.

¹⁴⁰Notes by the Chairman of the PAG on his meeting with the Director-General of FAO - 26 June 1974', June 1974, FAO Archives box I. Organizational PAG membership 1/4.

¹⁴¹Max Milner, letter to chairman and members of PAG, 14 October 1974, Scrimshaw personal collection.

¹⁴²'Issues for the World Food Conference: the PAG view', November 1974, Scrimshaw personal collection.

¹⁴³'National Food and Nutrition Policies', *op. cit.*, note 138 above, paragraph 467.

the creation of a world food policy as the central goals. Among the tangible results were the successful calls for establishing two agencies, the International Fund for Agricultural Development (IFAD) and the World Food Council (WFC), whose responsibilities included managing the implementation of the conference's resolutions. The World Food Council was slated to be a UN organ that would co-ordinate all UN agency policies related to nutrition, food trade, food aid, and other matters.¹⁴⁴ Given the focus on food at the conference, nutritional issues were not prominent in the proceedings. Resolutions calling for expanded nutrition education, food supplementation, breastfeeding, nutrition surveillance, and national nutrition policies were, however, presented in the final documentation.¹⁴⁵ The most important resolution related to nutrition, Resolution V, dealt solely with policies aimed at nutritional improvement and, among other demands, requested that the PAG, WHO, FAO, Unicef, WFP, World Bank, and UNESCO design a project for introducing multi-sectoral food and nutrition planning in developing countries. Other goals for the UN agencies included a global nutritional surveillance system and a co-ordinated programme in applied nutrition.¹⁴⁶

The conference participants did not consider nutrition to be unimportant, but they believed first and foremost in boosting global food production. Solving hunger problems in the most idealistic sense drove them to ever-greater statements of commitment which affirmed the importance of hunger and malnutrition. The participants concluded that their vow "that 'within a decade no child will go to bed hungry, that no family will fear for its next day's bread, and that no human being's future and capacities will be stunted by malnutrition' was a solemn pledge of the entire international community."¹⁴⁷ Believing this conference to be a milestone in the history of hunger, they further stated that "History would take that pledge as a yardstick for judging the adequacy of the policies framed and the action taken."¹⁴⁸

For FAO, WHO, and Unicef, the conference ramifications did not shift their priorities or working methodology.¹⁴⁹ Nevertheless, in historical perspective, the seeds for future changes in nutritional focus and childhood health policy could be

¹⁴⁴*Report of the World Food Conference*, op. cit., note 1 above, pp. 12-13, 18-19. See also: Sayed A. Marei, 'The World Food Council', in Sartaj Aziz (ed), *Hunger Politics and Markets*, New York, New York University Press, 1975, pp. 91-3.

¹⁴⁵*Report of the World Food Conference*, op. cit., note 1 above, pp. 9-11.

¹⁴⁶*Ibid.*, pp. 9-10.

¹⁴⁷*Ibid.*, paragraph 394.

¹⁴⁸*Ibid.*

¹⁴⁹Henry R. Labouisse, letter to Boerma (FAO head) and Mahler (WHO head), 6 December 1974, FAO Archives, Registry files, NU 1/8 and NU 1/9.

found in the proceedings. In 1983, Teply noted that Labouisse's address at the World Food Conference had contained reference to "basic services", a term that came to encompass the aims of Unicef policy during the late-1970s and 1980s.¹⁵⁰ Specifically, Labouisse had called for a marriage of health and nutrition, which could be conducted by immunization, growth monitoring, and breastfeeding initiatives. In his conclusion, Labouisse had clearly identified the new trend for agency-wide policy: "one always comes back to the need for simple, basic services at the level of the village or the slum, supported by appropriate action at the national level through government planning and resource allocation. This concept is receiving increasing acceptance".¹⁵¹ Indeed, ANPs, supplementary feeding, and other enterprises were losing momentum as this new ideology gained support and direction. For Unicef, these "basic services" were just beginning to figure into the calculus for future childhood health programming.

The events leading up to the World Food Conference and the conference itself did spur attempts at national planning in the field. From his post as regional WHO nutrition adviser for Africa, Ken Bailey worked furiously between 1972 and 1976 to inject African governments with interest in nutritional programming in development plans. Initially Bailey's tools consisted mainly of printing and distributing matter relevant to these programmes. He saw that printed matter could only do a limited amount of good and began organizing regional meetings to discuss the topics. The problems faced were insurmountable; it was difficult to even achieve a quorum at the meetings and since travel was not reimbursed, only twelve to fourteen countries usually had representation. Furthermore, the representatives who did attend were rarely good inter-sectoral leaders. Usually, according to Bailey, the countries simply sent someone from their local embassy, if they sent anyone at all. When Bailey adjusted his tactics and planned to visit the countries while working with his FAO counterpart, FAO often would not allow its experts to travel and thereby stifled the plans. Although FAO had relatively more staff in the countries than WHO, they were all working in super-specialized fields of agriculture and a staff member's expertise seldom rested squarely in nutrition.¹⁵² The overarching problem was that WHO and FAO never had much more than "intermittent support" for nutrition plans. Although the goal was to develop the capacity within each country to conduct nutrition programming, Bailey felt that "the countries couldn't really manage unless we went

¹⁵⁰Les Teply, letter to J. Charnow, 18 May 1983, Unicef Archives, C242, Teply files.

¹⁵¹Henry R. Labouisse, 'Statement by Mr. Henry R. Labouisse, Executive Director of Unicef, to the World Food Conference, Rome, 11 November 1974', New York, 25 November 1974, E/ICEF/Misc.237, p. 6.

¹⁵²Ken Bailey, interview, 1 April 1996.

and worked with them."¹⁵³ Bailey was working in one of the toughest, poorest regions, but his struggles were experienced by many other staff people in developing countries for whom the task of inducing excitement about national nutrition programming was profoundly difficult. Moreover, when countries simply did not have the indigenous expertise to design and implement the programmes desired by FAO, WHO, and Unicef, the programmes usually failed to get off the ground.

PAG Problems

In the view of top administrators and policy makers at FAO, WHO, and Unicef, it was no secret in the development community that the PAG had achieved few practical successes during its nearly 20-year tenure. Aykroyd noted in 1970 that in terms of the PAG's original purpose -- the development of high-protein weaning foods -- the PAG had "laboured on this problem for 10 years or more, and a number of nutritious mixtures have been evolved and subjected to trial. But practical success has been achieved with only a few of these."¹⁵⁴ Thus, although implementation had never been the PAG's prerogative, the entire focus on this type of food development was being called into question. Two of the inherent problems in these mixtures were their high price and the complexity of the equipment required. Unicef wished for simple equipment that could be used on a community level to produce high-protein foods at a low cost.¹⁵⁵ Although the goal was elusive, even Aykroyd did not rule out the possibility that these mixtures might be useful some time in the future. Generally, however, high-protein, technologically-driven foods had fallen from a state of grace.

In 1971, the PAG continued to reinvent itself, this time by altering its name. Scrimshaw, then the PAG Chairman, in a letter to the Director-General of FAO, A. H. Boerma, as well as to the heads of Unicef and WHO, explained that although the PAG had been increasingly working on protein and caloric concerns, its name continued to give the impression that the group "does not take calorie needs into sufficient consideration in dealing with protein matters."¹⁵⁶ Scrimshaw expressed the group's suggestion that the name be changed to the "Protein-calorie Advisory Group of the United Nations" rather than the broader heading, "Food and Nutrition Advisory

¹⁵³Ibid.

¹⁵⁴Aykroyd, *op. cit.*, note 2 above, p. 69.

¹⁵⁵'Report of the Executive Board', April-May 1973, E/ICEF/629, paragraph 57.

¹⁵⁶Nevin S. Scrimshaw, letter to Boerma, 21 February 1971, FAO Archives, I. PAG Membership box 2/4.

Group".¹⁵⁷ Later in the year, the actual name merely shifted from the FAO/WHO/Unicef Protein Advisory Group to the Protein Advisory Group of the United Nations.¹⁵⁸ Scrimshaw also conveyed serious concern that the PAG was not being called on to act in the broader role that it had adopted during the previous years. At the most recent PAG meeting, Scrimshaw had noted that "there was no request for advice from any UN Agency".¹⁵⁹ Clearly, support for the PAG was flagging. In Scrimshaw's opinion, UN agencies which were working on projects in PAG territory were not calling on it for advice, a move which was increasing "the danger that support may develop...for a separate advisory body within the UN itself."¹⁶⁰ In an unintentional move symbolic of the continued emphasis given protein, Scrimshaw closed the letter with his hope that the PAG would continue to provide advice for "UN activities which contribute to meeting present and future world protein needs."¹⁶¹ Even with a suggested name change and its expanded scope, the PAG was evidently much the same group it had always been.

Scrimshaw's concerns about how the PAG was being treated by the UN agencies reflected the decline in the PAG's leverage. Internally as well, the group was deteriorating. During the summer of 1971, Max Milner, the PAG's secretary and a long-time Unicef worker, discovered that he had not been receiving important inter-agency correspondence regarding PAG affairs. Ignition of this issue had occurred when a Unicef colleague had passed on a significant letter Boerma had written to the heads of UN agencies about possible co-sponsorship of the PAG.¹⁶² At the time, the PAG was considered a UN advisory body sponsored by WHO, FAO, and Unicef. Boerma had apparently autonomously sought to branch out the PAG's financial base without clearing the terms with the other sponsors.¹⁶³ While this incident could be interpreted as a bureaucratic oversight, when examined in light of future breakdowns, it is an important indicator of the confused manner in which the group was conducting

¹⁵⁷The initial call for changing the name to the Protein-Calorie Advisory Group was rejected "because a special effort was needed in programs of the United Nations system to ensure adequate dietary protein relative to calories." Further, as of March 1973, the PAG secretariat believed that calories were receiving the extra attention they required and did not need a further boost from the PAG. "The 'Protein Problem'", op. cit., note 34 above, p. 787.

¹⁵⁸G. H. Beaton et. al., op. cit., note 69 above, p. 7.

¹⁵⁹Nevin S. Scrimshaw, op. cit., note 156 above.

¹⁶⁰Ibid.

¹⁶¹Ibid.

¹⁶²Max Milner, letter to E. M. DeMaeyer –WHO medical officer in nutrition division, 16 August 1971, FAO Archives, PAG membership, box 1/4.

¹⁶³Max Milner, letter to E. J. R. Heyward, 13 August 1971, FAO Archives, PAG membership, box 1/4.

its activities. Some good did, however, come of Boerma's request. Robert McNamara, then the head of the World Bank, agreed to sponsorship of the PAG with a first-year contribution of \$25,000. This move sealed the significant addition of a new, exceptionally wealthy, player in nutritional activities. On behalf of the Bank, McNamara stated that his agency was "interested in measures to close the protein gap in developing countries" and hoped to further this goal through association with the PAG.¹⁶⁴

Misunderstandings and hostility were commonplace in the PAG correspondence of the early-1970s. In one typical outburst, Ganzin at FAO castigated Milner for apparently overstepping the boundaries of the scientific secretary and suggesting "orders" to Berg at the World Bank. Further, Ganzin was concerned about Milner's ability to keep PAG secretariat documents confidential.¹⁶⁵ In response, Milner characteristically finessed the situation by expressing his regrets that his letter to Berg had been viewed as an order "since this was farthest from my mind when writing it."¹⁶⁶ These interactions reflect the communication breakdown and general deterioration of contact within the PAG. As word of such conflicts spread, esteem for the group apparently dropped.

While the PAG consistently attempted to expand its terms of reference, other UN agencies worried that the group would infringe on their autonomy and in-house expertise. The PAG circulation of a document on its future direction alarmed at least one agency head. In the document, written in October 1973, the PAG called for a vast expansion of its responsibilities including advisory roles in nutrition policy and planning. Further, the document recommended again that the name of the PAG be changed to the "Protein-calorie Advisory Group of the United Nations System".¹⁶⁷ A high-level letter written by Boerma to McNamara and Labouisse, summed up FAO's leading fears. Boerma was concerned that the PAG would publish advice that "may diverge from the instructions and guidance which we receive from our governing

¹⁶⁴Robert S. McNamara, letter to A. H. Boerma, 16 July 1971, FAO Archives, PAG membership, box 1/4.

¹⁶⁵Marcel Ganzin, letter to Max Milner, 2 February 1973, FAO Archives, I. PAG membership 2/4. Ganzin appears to have been easily shaken by apparent breaches of confidentiality. In a letter to WHO, he expressed his "surprise" that WHO had learned the nature of his discussions with Unicef two months earlier. In Ganzin's mind, the discussions had been purely internal, and Egger, Unicef's director of programming, had assured him of this. Marcel Ganzin, letter (in French) to A. Raba (WHO medical officer in nutrition), 22 March 1973, WHO Archives, box A.0917.

¹⁶⁶Max Milner, letter to Marcel Ganzin, 21 February 1973, FAO Archives, I. PAG membership 2/4.

¹⁶⁷The future direction of PAG', New York, 24 October 1973, FAO Archives, PAG membership 1/4, p. 3.

bodies."¹⁶⁸ Further, he feared the creation of a scenario in which it "would be embarrassing to have to explain to governments the existence of uncoordinated advice."¹⁶⁹ More than being concerned for a lack of co-ordination, Boerma, supported by Ganzin, saw new opportunities to provide technical advice on national nutrition policies as germane to FAO and did not wish to see another organization infringe on this work. Boerma thought that if the PAG extended its role, other UN agencies might begin going to the PAG for national nutrition advice before requesting such information from the technical agency (namely FAO) with competence in the field. Boerma had condescendingly noted that there was no PAG historical precedent that could forecast "success in a broader policy-related role."¹⁷⁰ In his mind, the PAG would do best to keep its focus on protein and veer away from a dilution of its expertise. At Unicef, Heyward was less concerned with the expertise and more concerned that their very sound technical meetings produced reports that had no impact on policy or programmes. As a result the supporting agencies sent more and more junior people to the PAG meetings.¹⁷¹ Only complicating matters was the ongoing showdown between the PAG and the 1973 joint FAO/WHO protein recommendations mentioned earlier in this chapter.

Toward the end of Scrimshaw's chairmanship of the PAG in 1972 and 1973, fundamental policy questions began to break out at the general meetings. For Scrimshaw, the developments centred around the decreased attention protein was receiving from PAG-advised agencies and even PAG members. FAO in 1972 communicated to the PAG its wavering support for the continued use of the term "protein gap" since FAO surveys were showing that per capita, there was 70% more protein available than was required to meet basic human demands. Like its peers, FAO saw the problem as emerging from the maldistribution of the protein available rather than from a lack of protein in general.¹⁷² In spite of calls for clarification of what was becoming a protein dilemma, Scrimshaw consistently asserted that the majority of experts backed the positions of the 1968 ACST report and of the PAG.¹⁷³ Thus, Scrimshaw's departure from the chairmanship of the PAG held the faint promise of improved PAG status.

¹⁶⁸A. H. Boerma, letter to McNamara (cc. to Labouisse), November 1973, FAO Archives, I. PAG membership.

¹⁶⁹*Ibid.*

¹⁷⁰*Ibid.*

¹⁷¹E. J. R. Heyward, interview, 14 September 1995.

¹⁷²For example, see: 'Protein Advisory Group Report on the Twentieth Meeting', Paris, PAG Meeting report document 3.14/17, 19-23 June 1972, Unicef Archives, CF-NYHQ-05ANS-002, p. 9.

¹⁷³*Ibid.*

From the beginning of his tenure as chairman in 1974, Joaquín Cravioto found himself constantly defending the integrity and authority of the PAG. The PAG's near exclusion from the World Food Conference served as Cravioto's welcome to the harsh political realities facing the group. In a follow-up discussion of this issue between Cravioto and Boerma, Cravioto suggested additional guidelines for the nature of PAG work. The main role of the PAG, according to Cravioto, was "to assess the philosophy, policy, programmes and action in the field of nutrition carried out by the UN agencies".¹⁷⁴ Further, Cravioto noted that the primary concern of the PAG was to be concerned with policy matters though it would still continue to examine new and emerging scientific topics. Ironically, at the same time the PAG was disappointed by the lack of advice being asked of it, the supporting agencies allowed for the PAG to expand its scope and change its name. After some prodding from the other agency heads, Boerma conceded to the PAG revisions sought by its membership.¹⁷⁵

The PAG finally became, in the summer of 1974, the Protein-calorie Advisory Group of the United Nations System, and expanded its advisory realm to include socio-economic issues, trends in global food supply and consumption, and policy formulation.¹⁷⁶ At the same time, McLaren published his most stinging condemnation to date of protein policies, published in the *Lancet* and entitled 'The Great Protein Fiasco'. For the most part, McLaren rehashed his arguments that there was no "protein gap" and that the PAG was the culprit for perpetuating this myth. As in past pieces, he asserted that a focus on protein malnutrition was an inaccurate oversimplification of the actual nutritional problems facing children (and adults) in developing countries. As for the ramifications of the protein crisis and the decades of protein obsession, McLaren ominously declared, "The price that has had to be paid for these mistakes is only beginning to be realised."¹⁷⁷ Through his citations and quotations, he further made it clear that among those guilty of misleading the flock were Autret and Scrimshaw.¹⁷⁸ Because of this article's attractive name and the timing of its publication, it has received considerable historical attention, especially as some have adopted the term "the great protein fiasco" to describe the protein culture of the 1950s, 1960s, and 1970s.¹⁷⁹ As this chapter has highlighted, McLaren's piece was the

¹⁷⁴Notes by the Chairman of the PAG, op. cit., note 140 above.

¹⁷⁵Henry R. Labouisse, letter to Boerma, 18 July 1974, FAO Archives, NU 13/3-13/4.

¹⁷⁶'PAG's name changed, scope widened', Rome, press release, 26 June 1974, FAO Archives, NU 13/3-13/4. This piece also appeared in the *PAG Bulletin*, September 1974, 4(3), pp. 1-2.

¹⁷⁷Donald S. McLaren, 'The great protein fiasco', *Lancet*, 13 July 1974, 93-96, on p. 93.

¹⁷⁸*Ibid.*, p. 95.

¹⁷⁹In *Protein and Energy*, Carpenter referred to this article on two occasions noting that after its publication, "it then became impossible to shrug the matter [of a protein crisis] off as a technical

culmination of years of attacks on protein policies and therefore symbolized the turning of the tide against protein.¹⁸⁰

The World Bank

It is not the purpose of this dissertation to map out the political and scientific machinations which led the World Bank to begin taking a role in international nutrition nor to identify the route that it took in nutrition programming. Alan Berg, one of the principal advocates for nutrition at the Bank, has elaborated on this history.¹⁸¹ I wish to keep my historical lens focused on FAO, WHO, and Unicef since through the time period covered by this dissertation, they were the undisputed leaders in nutrition policy, research, and programming. Nevertheless, as far as the history of FAO, WHO, and Unicef is concerned, the Bank's entrance into the nutritional field is nothing less than a landmark. For more than two decades, these three UN agencies had basically dominated nutritional issues in the UN theatre. Certainly, there had been substantial co-operation among agencies such as the United Nations' Development Programme (UNDP), the International Labour Organization (ILO), and other bodies. One might also consider the Pan American Health Organization's (PAHO) nutrition activities as well as those of WFP. In these two latter cases, both agencies were integrally linked to FAO, WHO, and Unicef. PAHO is, at its heart, a partner with WHO, while WFP is an aid programme sponsored by FAO and the UN.

The World Bank's decision to pursue nutrition issues represented an unprecedented change in institutional attitude toward nutrition issues from within the Bank. One high ranking Bank associate described the shift to WHO in the following understated terms: "the Bank has been taking a more direct interest than formerly in the subject of nutrition...we have joined WHO, FAO and Unicef as a sponsoring agency of the Protein Advisory Group...we have retained a consulting firm [to advise us] on ways in which the Bank might possibly act to help its member governments

detail relating to a slight difference in emphasis." I would argue that McLaren's article along with previous published criticisms and the growing resentment for the PAG documented herein induced the change. Carpenter, op. cit., note 23 above, pp. 198-99, 228-29, quote on 228.

¹⁸⁰It is a point of historical interest that Cicely Williams generally found McLaren's article to be "excellent". See: Cicely Williams, 'On that fiasco', *Lancet*, 5 April 1975, 793-4, on p. 794. Williams herself was furious with the scientific establishment's exploits in protein malnutrition. She submitted that "it was not the clinicians with their modest observations and their non-existent research grants, but the scientists, who made the lamentable errors and wasted so much time, money, and personnel." (p. 794)

¹⁸¹Alan Berg, *Malnutrition: What Can Be Done? Lessons from World Bank Experience*, Baltimore and London, The Johns Hopkins University Press, 1987.

improve levels of nutrition."¹⁸² Early in 1974, FAO, WHO, Unicef, and the World Bank had a meeting in Rome to discuss joint nutritional work, and they also began to schedule periodic meetings among the agencies. Although it would take years before the Bank would engage in multiple nutrition projects, within a decade the nutritional triumvirate would be a triumvirate no more.

Charles Egger, Unicef's director of programming, summed up the practical reason for enlisting the Bank in nutrition efforts (as well as other undertakings): "The international institution which has by far the greatest resources is the World Bank and its related agencies".¹⁸³ In spite of the mutual interests between the World Bank and WHO, FAO, and Unicef, only FAO had formal relations with the Bank during the early-1970s. Further, it was not until 1973 that broad inter-agency nutrition discussion between the Bank and WHO, FAO, and Unicef began.¹⁸⁴ Before then, Unicef had conducted some ad hoc collaborative operations in the field but did not have a systematic means for collaboration.¹⁸⁵ Unicef was impressed by the Bank's decision to group its nutrition division with population but sceptically noted in 1973 that "the Bank has as yet no clearer ideas than Unicef about how to tackle the problems of malnutrition in developing countries."¹⁸⁶ According to Unicef meetings with Bank staff, the Bank's first plan was to introduce nutrition into its family planning programme in two districts in India.¹⁸⁷

The World Bank's decision to engage in nutritional activities in part reflected the success of FAO, WHO, and Unicef in promoting nutritional issues. On the other hand, the relatively low funding levels accorded nutritional issues encouraged the Bank to provide funding for an area that its experts viewed was insufficiently financed and supported. Because of the Bank's close relationships with planners, economists, and leaders at top governmental levels in the developing world, its leadership understood the potential for it to make headway on nutrition in a manner that FAO, WHO, and Unicef had been unable to do. In addition to its political savvy, the Bank envisioned

¹⁸²Harold Graves, letter to M. R. Sacks, 13 October 1971, WHO Archives, box A.0968, folder 2.

¹⁸³Charles A. Egger, Memorandum to field offices on 'Relations between Unicef and the International Bank for Reconstruction and Development (IBRD)', 6 June 1973, WHO Archives, box 1066, folder 13.

¹⁸⁴Inter-agency discussion does not denote inter-agency cooperation. Early in 1974 a WHO programme co-ordinator wrote to his colleagues that opportunities for WHO to present potential projects to the Bank would not be possible until a "later stage." Michael R. Sacks (WHO Chief, Programme coordination), 'Note for the record', 8 March 1974, WHO Archives, box A.0968, folder 2.

¹⁸⁵Egger, op. cit., note 183 above.

¹⁸⁶Newton R. Bowles, 'Meeting with International Bank for Reconstruction and Development', 2 January 1973, WHO Archives, box A.1066. Charles Egger attended this meeting along with Bowles.

¹⁸⁷Ibid.

making a contribution by incorporating nutrition components in many of its projects, though its leaders were cautious about undertaking strictly nutritional ventures.¹⁸⁸ Its tentative recommendations in 1973 called for two "experimental" nutrition undertakings in 1975,¹⁸⁹ two or three in 1976, and three or four in 1977 and 1978.¹⁹⁰ In fact, the Bank's nutrition projects did not really get under way until 1977.¹⁹¹

In spite of the general spirit of optimism regarding nutrition projects, Michael Hoffman, the director of the International Relations department at the Bank and a nutrition proponent, believed that the nutrition promoters "have a considerable job ahead of us to convince the Board [of the Bank] that there is such a think [sic] as a 'nutrition project' suitable for Bank Group financing".¹⁹² The Bank's primary interest in nutrition did not stem simply from a perception that better nutrition levels fostered economic development: a Bank report noted before the start of activities that the case for nutritional intervention on economic grounds was conceptually new and still questionable.¹⁹³ There was a considerable lack of confidence on the part of the Bank toward FAO, WHO, and Unicef nutrition activities and vice-versa. The Bank identified several shortcomings that it felt characterized the efforts of WHO, FAO, and Unicef nutrition programmes to date: 1) institutional child-feeding programmes aside, nutrition activities "have been modest, limited mostly to experiments and pilot projects" 2) "nutrition investments have often not been directed specifically to the most vulnerable segments of the population" 3) "mass techniques have been insufficiently employed" 4) medical scientists and food technologists have dominated the nutritional field; "little attention has been directed to moving the field into broad-gauged operational activities" and 5) the bulk of projects had been financed and supported by external grants of food and money with help from experts.¹⁹⁴ Further, the Bank's survey of nutritional programmes since the 1950s revealed that except for the direct feeding programmes used after the war, "the amounts of assistance thus far applied specifically to nutrition problems have been too small to have a significant impact."¹⁹⁵ The Bank's evaluation provides an unusually broad and scathing view of the nutrition

¹⁸⁸Michael L. Hoffman, letter to A. Bellerive (director of WHO division of coordination), 30 November 1973, WHO Archives, box A.0968, folder 2.

¹⁸⁹'Supplement to the minutes of the meeting of the Executive Directors of the Bank and IDA', December 1973, WHO Archives, box A.0968, folder 2.

¹⁹⁰'Sector program paper', op. cit., note 74 above, p. 18.

¹⁹¹See Chapters 1 and 2 of Berg, op. cit., note 181 above.

¹⁹²Hoffman, op. cit., note 188 above.

¹⁹³'Sector program paper', op. cit., note 74 above, p. 3.

¹⁹⁴Ibid., pp. 7-8.

¹⁹⁵Ibid. p. 10.

programmes so far chronicled in this dissertation. The Bank's sharp responses to FAO and WHO suggestions often highlighted low opinions of agency protocols. After receiving word that FAO and WHO were interested in receiving Bank financial support for experts to help governments design nutrition policies, the Bank provided its frank appraisal of the idea. Hoffman wrote: "I must say that our reaction...is rather negative, partly because we have not been very favorably impressed with the results of 'teams of experts' responsible to several agencies for advisory work in other sectors."¹⁹⁶ Evidently, the Bank was not interested in approaching nutritional issues with the same tact pursued by FAO, WHO, and Unicef previously.

From the WHO/FAO perspective, the Bank's initial conception of a nutrition project was grounded only in food distribution and production and overlooked decades of research in relevant fields such as malnutrition and infection. Furthermore, WHO took offence ^{at} the Bank's critical tone of agency projects during the previous 25 years. On one occasion, E. M. DeMaeyer, a senior WHO nutrition officer, sharply criticized a Bank document on nutrition policy and stated that the author had failed "to realize that a massive effort has been going on during this time [the past two decades] to train people in the field of nutrition and to sell the concept of nutrition to politicians and administrators." DeMaeyer continued, further asserting the integrity of the agencies' nutrition work, "If the Bank is at present able to enter the field of nutrition, it is probably largely thanks to the efforts of other agencies which have given proper recognition to the importance of nutrition in economic development."¹⁹⁷

New Nutrition Horizons

While national nutrition policy-making constituted a major part of dialogue during the 1970s, other areas for nutritional research and expenditures were coming to the fore. The Jelliffes, writing from their posts at the Caribbean Food and Nutrition Institute in Kingston, Jamaica, were continuing to emphasize the problem of breastfeeding cessation in expanding urban areas as mothers purchased expensive baby

¹⁹⁶Michael Hoffman, letter to A. Bellerive, 12 March 1974, WHO Archives, box A.0968, folder 2. Although on an inter-agency level, the correspondents were infrequently nutritional experts, the respective nutrition division had always originated the ideas. In this case, for example, Bengoa, the chief of the WHO Nutrition Unit, had communicated the idea for Bank-funded policy experts to Bellerive earlier. J. M. Bengoa, memorandum to A. Bellerive on cooperation with the IBRD, 1 February 1974, WHO Archives, box A.0968, folder 2.

¹⁹⁷See for example: E. M. DeMaeyer, letter to department chiefs on policy guidelines for Bank nutrition activities, 10 January 1974, WHO Archives, box A.0968, folder 2.

foods and used cow's milk as a proxy for breastmilk.¹⁹⁸ In 1971, Unicef, FAO, and WHO sponsored a conference on "New Urban Families" which specifically dealt with the emerging health problems of migrants to the cities in developing countries. The conference participants were particularly distressed about the use of advertising by commercial firms to push the sales of inadequately nutritious foods for young children.¹⁹⁹ Nevertheless, the international crusade against breastmilk substitutes would take years to come to fruition. Through maternal and child health programmes, Unicef and WHO had been discouraging early weaning and had been training mothers in the importance of nutritious weaning foods for their infants for years. However, the breastfeeding issue was not prioritized until the situation became much better publicized. A famous photograph of feeding bottles on top of babies' graves in Zambia appeared in a Unicef publication in 1973.²⁰⁰ In 1974, the Unicef Executive Board was simply calling for "greater efforts" to address the problem of premature weaning.²⁰¹ In the rhetoric of the policy makers, breastfeeding problems posed a major problem but certainly not the sort of crisis that the protein gap had.

For all the attention given nutrition during previous years, Unicef's administrators feared that their nutrition programming lacked direction and purpose in many cases. By 1972, the ebb and flow of nutrition interests had made its way back to interest in supplementary feeding once again. Spurred in part by a positive report from WHO's Nutrition Unit, Unicef reasserted its commitment to supplementary nutrition programmes that were part of a broader plan for treating and preventing childhood malnutrition.²⁰² This move was a paradoxical step considering the past objections and the inconclusive findings by researchers on the benefits of such actions. Further, when improperly implemented, supplemental food programmes could actually encourage early weaning, thereby defeating their purpose and exacerbating many of the pervasive nutritional problems already present.²⁰³ Nevertheless, WHO encouraged such programmes so long as they were implemented in the context of national food and nutrition policies and were sensitive to past problems with this type of nutritional involvement. Labouisse also guided the re-ignition of supplementary child feeding

¹⁹⁸Derrick B. Jelliffe and E. F. Patrice Jelliffe, 'The urban avalanche and child nutrition: II. Special problems in developing countries', *Journal of the American Dietetic Association*, August 1970, 57(2), pp. 114-18.

¹⁹⁹'New urban families: conclusions and recommendations of a workshop on nutrition', Vienna, 28 August 1971, Unicef Archives, 88R025, box T-006, Teply files.

²⁰⁰See: *Unicef News*, issue 74, December 1972-January 1973.

²⁰¹'Report of the Executive Board', May 1974, E/ICEF/633, paragraph 30.

²⁰²'Supplementary feeding programmes for mothers and young children: paper prepared for Unicef by WHO Nutrition Unit', 14 March 1972, E/ICEF/CRP/72-11.

²⁰³*Ibid.*, p. 12.

programmes along the lines of his observations that "children in the weakest socio-economic groups in most countries derived little benefit from improvements in methods of commercial agriculture or increases in the market supply of processed foods."²⁰⁴ Reflecting on the golden tenet laid down by Pate -- to help the most helpless -- Labouisse envisaged long-term supplementary feeding programmes and other nutritional interventions as the only means to improve the lot of those children living under the worst circumstances. Further, the Executive Board even discussed resuming school feeding -- a practice which had been slowly phased out during the previous two decades -- in an effort to improve student performance and to prevent drop-outs.²⁰⁵

As a result of their feelings of insecurity on nutritional priorities, in 1973 the Unicef Board enlisted Professor Jean Mayer of Harvard to conduct a major report on child nutrition in developing countries for presentation to the nutritionally-concerned Board in 1975. Unicef hoped that the study would provide concrete suggestions about which initiatives would more effectively and rapidly improve childhood nutrition than existing programmes.²⁰⁶ Mayer had extensive experience working on U.S. nutritional policy through an array of prominent national posts, such as Special Consultant to the President from 1969-1970.²⁰⁷ A few administrators at Unicef were concerned that the international background of Mayer and his team was profoundly insubstantial for the task at hand. From the start of the study, Charles Egger was concerned with its methodology and the lack of international experience of study team members. A baffled Egger wrote to Heyward that "There is - to the best of my knowledge - not one person on Professor Mayer's staff who has worked in a developing country and been actively involved in the development of a national policy or the formulation of guidelines."²⁰⁸

The inner-workings of the Unicef administration which backed Mayer's study shed much light on how little was known about nutrition and determining nutritional priorities. Further, it reveals that with the erosion of "solutions" to PCM through a loss of faith in the abilities of technological magic bullets, an avenue had been opened for identifying policy solutions. Although policy solutions were rarely vertical in

²⁰⁴'Report of the Executive Board', April-May 1972, E/ICEF/624, paragraph 32.

²⁰⁵*Ibid.*, paragraph 33.

²⁰⁶L. J. Teply, letter to A. J. Reynolds, 24 September 1973, Unicef Archives, 88R025, box T-006, Teply files.

²⁰⁷Jean Mayer (ed), *U.S. Nutrition Policies in the Seventies*, San Francisco, W. H. Freeman and Company, 1973, p. 5.

²⁰⁸Charles A. Egger, letter to E. J. R. Heyward, 10 December 1973, Unicef Archives, J88R025, box T-006, Teply files.

nature -- they always called for a constellation of projects as well as inter-ministerial co-operation -- facets of policy development did reflect a desire for a policy framework that would impact hunger and malnutrition. The arduous search for the steps that could be taken to substantially improve childhood nutrition had so far been unconstructive for Unicef's programmes. Unicef's deputy director of the programme division, Newton Bowles, was preoccupied with the Mayer study since he had "observed a good many global studies undertaken for Unicef which eventuated in illuminating analyses of problems without being very helpful as to what can be done about them."²⁰⁹ In spite of past experiences, Bowles believed that the Mayer study would finally provide a solid base for replying to the pounding criticism of the Unicef Executive Board on Unicef's failure to do more about childhood hunger and malnutrition. Bowles and his colleagues entrusted Mayer to produce a blueprint "for clear policy guidance to Unicef and [its] partners in developing countries and in other international organizations about what to do" about malnutrition.²¹⁰

While the Unicef administrators desired a plan that would be precise and clear, the initial feedback to Mayer's study from the country representatives further illuminated the pervasive confusion associated with nutrition projects. Paul Biron, a regional Unicef food and nutrition officer, remarked that the Western-trained nutritionists' universal view that children and pregnant and lactating women had "unique nutrition needs" might be erroneous. Noting that children frequently are given the lowest priority for feeding, he sarcastically proposed that "perhaps the special needs of the children are to have different parents."²¹¹ The neglect to which Biron referred had been approached at nutrition seminars and by boisterous nutrition advocates like McLaren. Another Unicef representative, Poul Larsen, reported that he had not yet seen anything "striking" in the nutrition arena in Egypt. As far as applied nutrition programmes were concerned, for example, Larsen wrote Teply that "there is a lot of lip-service paid to nutrition demonstrations, but the audiences are 'thin' and the programme uninspiring."²¹² Nutrition success stories were very hard to locate.

²⁰⁹Newton R. Bowles, letter to Jean Mayer, 24 January 1974, Unicef Archives 88R025, box T-006, Teply files.

²¹⁰*Ibid.*

²¹¹Paul J. Biron, letter to L. J. Teply, 21 February 1974, Unicef Archives, 88R025, box T-006, Teply files.

²¹²Poul F. Larsen, letter to L. J. Teply, 19 March 1974, Unicef Archives, 88R025, box T-006, Teply files.

Conclusion

During the early-1970s, a flood of new issues was entering the nutrition realm at precisely the time when support for nutrition projects and policies was waning. In particular, the relationship between high fertility rates and low levels of nutrition was beginning to add momentum to the family planning movement.²¹³ As far as nutritional science was concerned, clinical investigators were becoming increasingly interested in the relationship between malabsorption and nutrition, since it had been hypothesized that viral, bacterial, and parasitic infections could lower the ability to absorb vital nutrients and consequently would lead to a higher likelihood of malnutrition.²¹⁴ Small clinical investigations in metabolic wards with children suffering from disorders such as ascariasis (intestinal worm infestation) consistently demonstrated that protein absorption appeared to be impaired and could therefore be considered a potential cause of clinical and sub-clinical malnutrition.²¹⁵ If the causes of malabsorption were treated and cured, then the malnourished would need less food to maintain a healthy nutritional status. On the other hand, if one did not take account of the level of malabsorption in a given population, then recommendations for adequate food output and per capita consumption could be incorrect. This latter idea was at the root of Scrimshaw's protest about the 1973 protein requirements. According to Scrimshaw, although the figures presented for adequate protein intake might have been appropriate for a perfectly healthy person in a developed country, they did not consider the stresses, including malabsorption, that affected health in developing countries.

With the entrance of the World Bank into the complex tapestry of nutritional politics during the early-1970s, nutritionists began to rethink their roles in the public health arena.²¹⁶ A letter from the chief of the Maternal and Child Health Division at WHO to Bengoa, the head of nutrition, sums up the broader problems and concerns

²¹³ Although there was a paucity of proof for the positive relationship between nutrition and family planning, it was nevertheless being emphasized as an important approach in the fight against malnutrition. See, for example: G. H. Beaton et. al., op. cit., note 69 above, p. 26.

²¹⁴ For an excellent perspective of the currents in this thinking, see the following special issue of *The American Journal of Clinical Nutrition* guest edited by Irwin H. Rosenberg and Nevin S. Scrimshaw: 'Malabsorption and Nutrition', *The American Journal of Clinical Nutrition*, October and November 1972, 25, pp. 1045-1289.

²¹⁵ Among the many articles on this topic which can be found in this volume is: Kshetrabasi Tripathy, Edgar Duque, Oscar Bolaños, Hernan Lotero, Luis Guillermo Mayoral, 'Malabsorption syndrome in ascariasis', *The American Journal of Clinical Nutrition*, November 1972, 25, pp. 1276-81.

²¹⁶ For a good description of the programmatic mechanics of protein-calorie initiatives before the World Bank's entry, see: John R. K. Robson, *Malnutrition: Its causation and control*, New York, London and Paris, Gordon and Breach, 2, 1972.

that were shared by many. After meetings with consultants hired by the World Bank, he wrote,

It is my impression that there is still only a vague awareness and understanding of the relationship between food availability, mortality rates, fertility and consequently population dynamics. There is even less awareness of the relationships by economic authorities than there is by a few of our health workers who have been able to work closely with families and observe the major underlying role that nutrition plays in mortality rates from illnesses that are labeled as infectious.²¹⁷

Although it is anything but surprising that community health workers would have a better understanding of hunger and health issues in the field, it is important to highlight how the people most likely to understand these issues were those with field experience. The people being encouraged to address these issues in the 1970s, however, were the economists, planners, and politicians who did not have field experience and were therefore at a disadvantage for comprehending the breadth and constitution of these hunger issues.

In 1974, the World Food Crisis eclipsed the concerns over the protein gap, and propelled food production and hunger to the forefront of political discussions. Grain reserves fell to extraordinarily low levels while the price of wheat on the global market soared, setting off inflationary responses world-wide.²¹⁸ Thus, far from wishing to discuss specific nutritional deficiencies, policy makers shifted their attention to issues of food scarcity. The course of events paralleled the concerns which had dominated the political arena after W.W.II and had inspired Orr's World Food Plan. Once again, food, not nutrition, was on the world agenda. The effects, as we shall see in the following chapter, would prove disastrous for the PAG and would reshape the course and consistency of nutrition policy.

²¹⁷Letter from chief MCH to Chief Nutrition, 17 November 1971, WHO Archives, box A.0968, folder 2.

²¹⁸For an extraordinarily vivid portrait of this crisis and its background, see: Lester R. Brown and Erik P. Eckholm, *By Bread Alone*, New York and Washington, Praeger Publishers, 1974.

Chapter VIII

Nutrition and Primary Health Care

I had 3 physicians working with me who were already there when I got there [to head WHO's Nutrition Unit in Geneva]. I considered only one of them partially competent and the other two very incompetent and I couldn't change them. That was it, there were four of us...you know the story of when a Martian came to earth and he was taken on a tour of the UN agencies and when this Martian saw this beautiful [WHO] building in Geneva and asked "What is that?" and [his guide responded] "Well [that's where] they take care of the health of all the people in the world." "Oh my gosh," [replied the Martian] "it should be a very great organization...how many people are working there?" "Well," [said the guide] "about 50%."

Moisés Béhar, chief of WHO Nutrition Unit 1975-1983¹

Nutrition Returns

As the world food crisis concerns began to fade in the mid-1970s, attention returned to the nature of nutrition programming in the UN agencies. With protein troubles a distant memory and dreams of successful nutrition programmes deflated, administrators and nutrition enthusiasts began to re-evaluate the role of nutrition in policy as well as in comprehensive health status. As nutrition seemed to be only one of the keys to achieving good health, policy makers considered what role it could actually play in relation to other programmes. Further, having seen how specific nutrition interests -- supplementary feeding, kwashiorkor, nutrition planning, and protein crises -- could dominate nutrition discussion, FAO, WHO, and Unicef with other agencies searched for a formula that would place nutrition in a position corresponding to its rightful place in development. In three decades, nutrition had evolved from being a, if not the, key priority for newborn UN agencies, to being one of many instruments available for promoting development and health.

From 1968 to 1974, tectonic shifts of grand proportions at the PAG, within the UN, and in global food supplies induced a critical evaluation of protein as well as of the cornerstones of nutrition policy. The murky results of these processes highlighted the troubling paradox of nutrition: on one hand, it was easily agreed that nutrition was

¹Moisés Béhar, interview, 29 December 1995. Béhar took up the director's position left by Scrimshaw at INCAP in 1961 and remained there until joining WHO in 1975.

of great importance in development, while on the other hand, few had widely accepted ideas regarding what to do about it. In the minds of many policy makers, the nutritionists had been unable to guide or create successful projects. Although expanded knowledge of the complexities of good nutrition status was coming to light, among top administrators there was a pervasive feeling that the past results of nutrition programmes and nutritionists' guidance had not fulfilled expectations. On the protein issue, policy makers felt utterly misled. After decades of hearing from scientific sources that protein malnutrition was the most important nutrition problem, the true nutritional problem appeared to be more firmly related to food quantity than quality. Even Waterlow, formerly a proponent of the protein gap, announced in 1975 that the nutrition problem which persisted was a food or energy gap.² Word from the field about the exacerbation of nutrition problems due to commercialization, urbanization and the population explosion further obfuscated possible methods of action.³ Furthermore, in the trail of the 1974 World Food Conference, the establishment of the World Food Council (WFC) and other agencies' interest in nutrition, it was difficult to determine what should be done about nutrition and who should be doing it. Dr. M. R. Sacks, chief of inter-organizational co-ordination for WHO, acutely felt the need for direction and coherence at his agency, as did his peers at FAO and Unicef. Sacks commented to WHO colleagues: "we obviously have an extremely complex problem of how to rationalize our efforts, both at headquarters and country levels, and at the same time meet the various requests for co-ordination emanating from various sources."⁴ Among the forces propelling improved nutritional policies was the World Food Conference which had requested that FAO, WHO, and Unicef unite to produce an "internationally coordinated programme in applied nutritional research" and to expand and rectify nutrition intervention programmes,

²J. C. Waterlow and P. R. Payne, 'The protein gap', *Nature*, 13 November 1975, 258, 113-17, on p. 117. Today, Waterlow regrets having published this article and states that he felt some pressure to publish the piece with Payne in order to relax professional troubles between them. The article, according to him, was based on the erroneous 1973 requirements which he had fiercely defended against the PAG's criticism. Waterlow believes that the pendulum has swung too far toward energy and insists that food quality (i.e. protein content) has been neglected to the detriment of international nutrition. J. C. Waterlow, interview, 7 June 1995.

³See for example: *Nutrition and Fertility Interrelationships*, Washington, D.C., National Academy of Sciences, 1975.

⁴M. R. Sacks, Chief CWO, memorandum to Director COR re. institutional arrangements relating to nutrition arising from ACC discussions, 16 December 1975, WHO Archives, box A.1162, folder 2. This letter was sent through Béhar and Dr. Zahra, another unit head, and received their approval. It may therefore be considered a composite image of attitudes at WHO.

particularly ANPs.⁵ It was widely believed that many past enterprises had failed in part because cost-benefit and cost-effectiveness analyses had been overlooked.⁶

Policy makers believed that they could plan for nutritional impact only by adjusting structures such as the PAG in order to manoeuvre their interests through the webs of bureaucracy and propound a unified nutritional approach. The core certainty about nutrition was that without improved co-ordination among the UN agencies, nutritional progress would remain beyond the grasp of UN programmes. Between 1975 and 1978, FAO, WHO, and Unicef explored and implemented structural changes to insure more fluid and effective nutrition policies in the future. From a policy perspective, a major influence originated with the fall of the PAG, which provided a new space in which to conceive of nutritional action. Furthermore, an image began to emerge in the scientific community and among development personnel of the necessities that could be provided for childhood health. Within a broad framework of health, nutrition came to have a centrally important niche, especially in terms of burgeoning interest in primary health care.

The Decline of Nutrition at FAO and WHO

Within FAO and WHO, the nutrition divisions' influence was vanishing in the mid-1970s due to practical and political shortcomings. In the realm of programmatic applications, much disappointment sprouted from the inadequacies of past initiatives. Nutrition education and training at FAO, for example, had split staff into two camps which senior food policy and nutrition officer Jean McNaughton described in the following terms:

On the one hand there is a group which appears to believe that since malnutrition still exists nutrition education and training have achieved nothing and should be abandoned, on the other, many people support nutrition education activities uncritically in the belief that it is enough to teach people what to eat in order to improve nutrition. Both groups ignore the complex network of factors that influence food patterns and food consumption.⁷

⁵'Interagency meeting on applied nutrition research', Rome, 16-17 October 1975, WHO Archives, box A.1162, folder 2, pp. 1-2.

⁶Ibid., p. 6.

⁷Jean W. McNaughton, 'A Review of FAO's Activities in Nutrition Education and Training 1949-1977', paper presented at International Conference on Nutrition Education, Oxford, 31 August-7 September 1977, Unicef Archives, PR-NU-002, p. 5.

As was the case with any of these nutritional issues, however, there were always at least two perspectives on every problem. WHO's Nutrition Unit also acknowledged the failures of nutrition education in the past but insisted that since such education had not even been attempted in most areas, especially not in the context of primary health care programmes, the technique should not be condemned.⁸

At FAO the problems with nutrition ran deeper than mere differences in ideology. Ganzin, the director of the Food Policy and Nutrition Division until June 1977, complained to Boerma that although organizational charts showed how nutrition was related to all the other divisions, "it is obvious that they [the connections] do not exist in reality."⁹ As FAO was more generally examining global food requirements, its expertise in country, state, local, and individual nutritional requirements was evaporating.¹⁰ Ganzin hoped that his division could fill these gaps with expertise and assist nutrition planning and food supplies on a country-by-country basis. He was furious about the negligible role given nutrition and asked that an official decision be made about whether the Food Policy and Nutrition Division would achieve an important position in FAO strategies or whether it would continue "as before (by itself), having a marginal role in FAO."¹¹ For the FAO Conference, the key to eliminating hunger and malnutrition during the coming decade was more dependent on the countries' taking responsibility for their nutritional problems than interventions engineered by FAO.¹² Although it agreed that nutrition should remain a principal focus, it was up to the Director-General to be attentive to the funds required.¹³ In contrast to past FAO Directors-General who provided the Nutrition Division with greater latitude in its work, Boerma was unenthusiastic and did not readily support new undertakings. FAO could provide assistance in shaping political will for responsible nutrition policies in national plans, but could otherwise not have significant impact. The negative sentiment for nutrition at FAO reflected the agency-wide view of nutrition in public health which was best summarized by Waterlow and Philip

⁸Report of the consultation on nutrition education through health care systems', Geneva, 28 November-2 December 1977, WHO NUT/78.3, Bengoa personal collection.

⁹M. Ganzin, letter to A. H. Boerma, 5 May 1975, FAO Archives, registry files, NU 1/8, 1/9.

¹⁰In 1978, 10,000 Burmese refugees died as a result of the poor implementation of FAO nutrition advice related to caloric requirements. The horrifying story highlights how important appropriate nutritional expertise and co-ordinated, standard nutritional requirements can be in relief operations. See: Cato Aall, 'Disastrous international relief failure: a report on Burmese refugees in Bangladesh from May to December 1978', *Disasters*, 1979, 3(4), pp. 429-34.

¹¹Ganzin, op. cit., note 9 above.

¹²*Report of the Conference of FAO, Eighteenth Session, Rome, 8-27 November 1975*, Rome, FAO, 1975, p. 37.

¹³*Ibid.*, pp. 37-8.

Payne, a professor of nutrition at the London School of Hygiene and Tropical Medicine. They asserted that the myth of the protein gap had had major consequences for the image of nutritional research. In *Nature* they wrote that out of the protein fiasco had arisen "the attitude that research on these nutritional problems is academic, irrelevant and a waste of time; that we know how to prevent malnutrition and therefore what matters is to use this knowledge."¹⁴ This comment no doubt summed up the feelings of some of the administrators at WHO, FAO, and Unicef. Although Payne and Waterlow counselled that nutrition intervention should not await the perfection of nutrition research, they well understood the damage done to nutritionists' reputations. While uncomfortably digesting the events of the protein gap they concluded: "perhaps the story of the protein gap shows the arrogance of supposing that we know the answers, and illustrates the need for a continuing critical examination of the premises on which action is based."¹⁵

As far as nutritional influence at WHO was concerned, WHO's Nutrition Unit chief, Moisés Béhar, often found himself commiserating with his FAO counterpart.¹⁶ Béhar took the position of chief in 1975 after leaving his post as head of INCAP. What he found upon arrival in Geneva was that since nutrition had received such a low priority, he would not be able to accomplish much of note from his new pulpit. In fact, if the fall of the status of nutritionists was still a work-in-progress at the other agencies, at WHO it was essentially a fait accompli. At Béhar's first meeting with Halfdan Mahler, WHO's Director-General, Mahler was purportedly very sarcastic about the work of nutritionists and their optimism.¹⁷ Béhar became so frustrated with the weakness of his position that after two years at WHO, he submitted his resignation. Upon receiving the letter of resignation, Mahler persuaded Béhar to remain as chief of the Unit. The circumstances surrounding that decision highlight both the low support given nutrition as well as the difficulties of pursuing any issue in a direct manner within the bureaucracy. Béhar recounted:

[Mahler] called me back and he asked me 'why do you want to leave?' I told him 'Look, I cannot put in writing all the reasons why I want to leave because I'm going to say things that I know important people aren't going to like.' 'Well,' replied Mahler, 'would you please put them in your handwriting, so as not to have them go through your

¹⁴Waterlow and Payne, op. cit., note 2 above, p. 117.

¹⁵Ibid.

¹⁶Moisés Béhar, interview, 29 December 1995.

¹⁷Ibid. This was by no means a singular observation. Several nutritionists interviewed recounted Mahler's perpetual negativity regarding nutrition.

secretary...and bring it to me personally?' I put it in writing and he promised that he would correct most of those things. In the end...they [Mahler and a co-director] confessed, no one point that I complained about could be corrected because of the structure...they couldn't fire eight people who had been there so many years because they couldn't afford to do it economically...there were always reasons why things couldn't be done.¹⁸

Even co-ordinated nutrition programmes were viewed negatively. FAO organized an inter-agency meeting in Rome in June 1976 to discuss joint action in countries for nutrition planning support. FAO was anxious to identify priority countries though Unicef and WHO did not have the same enthusiasm for this brand new initiative.¹⁹ WHO regional staff told Béhar that they viewed such co-ordination doubtfully since the countries themselves still had to request the assistance (which few were readily doing) and budgetary constraints and a lack of technical expertise precluded progress. Furthermore, FAO concentrated its planning personnel in Rome and served countries from there while WHO and Unicef were moving from the regional to country level. These bureaucratic differences created major obstacles to constructive co-operation and co-ordination.²⁰ Thus it seemed to many staff people that FAO, and the UN agencies more generally, were putting the horse behind the cart by attempting to initiate new projects that had not the financial, political, or technical support required. Nutrition enthusiasm was at a new, distinct low. Whereas in the past optimism for the potential progress from nutrition policies managed to ride out negativism about specific programmes, there were now deeply tempered expectations about nutrition's role. On the political front, nutrition was simply losing its firepower, and this played a major part in the PAG's declining status.

¹⁸In the interest of continuity, this comment has been slightly rearranged. Eventually, Mahler's bitterness for nutritionists overwhelmed Béhar. In 1982, he resigned from his post, permanently. Ibid.

¹⁹Report of interagency working session on country action and priorities in relation to nutrition planning support (NPS), Rome, 6-7 June 1976, Rome, FAO, 1976, Unicef Archives, CFNYHQ-05ANS-002.

²⁰R. Cook (Regional WHO Nutrition and Maternal Child Health adviser), letter to Béhar, 17 August 1976, Unicef Archives, CFNYHQ-05ANS-002.

The PAG: Modified or Dissolved?

While the PAG gasped for air during the mid-1970s, top administrators at WHO, FAO, Unicef, and the World Bank were declaring the group a terminal case. During the 23rd session of the PAG, there was consensus among the sponsoring agencies and the PAG members that the PAG performance during the past few years, especially since its terms of reference had been altered, had been unsatisfactory and that its current guidelines were overwhelmingly confusing.²¹ In an effort to continue the PAG, it was recommended at the meeting that the PAG should, nevertheless, immediately present itself to the WFC as the advisory group to UN agencies on nutrition.²² As a result, the PAG chairman, Cravioto, wrote the heads of WHO, FAO, Unicef, the UN, and the World Bank in June 1975 requesting a recommendation for the WFC which would state that the "PAG be regarded as the Nutrition Committee to the council or serving as the Advisory Body to such a Committee" (emphasis mine).²³ The accompanying rhetoric called for increased powers for the PAG and implied that the group would be a key player in the WFC's recent scheme for the eradication of hunger and malnutrition within a decade.²⁴

In the previous years, the PAG had managed to extract reluctant promises of support for its expansion from the UN General Assembly and from the PAG sponsors. The PAG's heady attitudes and calls for a drastically expanded scope disturbed the agency heads.²⁵ Scrimshaw believed that Berg was largely responsible for this irritation because he had pushed for the increase in economists and planners on the PAG. According to Scrimshaw, Berg had grown impatient with the "theoreticians talking to themselves" and desired people from the "real world" who could produce more tangible results.²⁶ In so doing, however, the PAG lost its unique technical

²¹M. Béhar, letter to Mahler regarding PAG, 17 June 1975, WHO Archives, box A.1162, folder 1. See also: Asok Mitra (new member of the PAG), letter to Cravioto, 2 June 1975, FAO Archives, I. PAG members 1/4.

²²Béhar, *op. cit.*, note 21 above.

²³J. Cravioto, letter to Mahler, Boerma, Labouisse, Waldheim, McNamara, 11 June 1975, FAO Archives, I. PAG membership 1/4.

²⁴*Ibid.*

²⁵Not everyone opposed the PAG's moves. At WHO, a few division directors believed that an expanded PAG could help nutritional problems, WHO's position among the agencies, and inter-agency co-ordination. As events will show, however, it was the opinions of the top administrators that really mattered. A. Zahra, letter to H. Mahler regarding PAG, 18 June 1975, WHO Archives, box A1162, folder 1. The World Bank, the PAG's most recent sponsor, was as reluctant to endorse Cravioto's request as were the other agency heads. Michael L. Hoffman, letter to Cravioto, 4 August 1975, FAO Archives, I. PAG membership 1/4.

²⁶Nevin S. Scrimshaw, interview, 26 July 1995.

qualifications and took on the types of people FAO already had on staff. The results, Scrimshaw thought, were devastating for the nutritionists: "For Joy [a prominent nutrition planner] and the economists, they wanted to focus on the problems, and if the problem was poverty and purchasing power, why then you didn't need all the sophisticated nutritional research or even sophisticated technical knowledge, you needed to get on with solving the problem."²⁷ Scrimshaw believed that "this gave a further impetus to FAO's dislike of the PAG and desire to see it terminated. It was a major factor in the termination."²⁸

Although the agencies agreed that some inter-agency structure was required to co-ordinate nutrition activities, the only option for a continuation of the PAG appeared to be a reformulation and modification of responsibilities. The intra-agency correspondence on this topic illuminates the depth of concern the UN agencies had about the future course of nutrition. In a letter to Mahler, Béhar articulated the deep troubles this issue had raised. He wrote:

May I indicate to you our concern at the confusion existing in the international field of nutrition. Many agencies within and outside the U.N. system are now very interested in this field and in developing programmes, but without mutual agreement on the basic principles of how to cooperate with countries or in what is necessary. Our position is a very difficult one because other agencies with larger resources but less technical capability are carrying out activities which may not be those most needed, and are not leading to development of self reliance of the countries. Our concern at this situation is not, of course on our account, but because countries are not obtaining the best help, and **the present efforts may once more discredit international work in this field instead of taking advantage of the present concern and interest in the field of nutrition problems in order to institute more rational action.** (emphasis mine)²⁹

Evidently, the increase in the World Bank's nutrition interest accompanied with the enthusiasm generated by the World Food Conference had presented tremendous new opportunities for nutritional progress. Given the past foibles of the PAG, however, it seemed that the most expedient manner of shedding the incompetent image some held of nutritionism was to decommission the PAG. On the letter cited above, handwritten

²⁷Ibid.

²⁸Ibid.

²⁹Béhar, op. cit., note 21 above..

remarks by Mahler and other WHO division directors indicated that WHO was preparing itself to pull out from PAG sponsorship.³⁰

At an informal meeting in July 1975 the agencies expressed their alarm that the PAG was trying to shapeshift and become less of an advisory group and more of an independent agency. Further, with the multiplicity of its disciplines, administrators widely agreed the PAG had become ineffective and "could no longer make any major contribution."³¹ Mahler believed that the group had become useless and suggested that it be disbanded. The other agency representatives agreed. It was at this meeting that discussion began about a possible successor to the PAG, which could be a functional committee of the UN Advisory Committee on Coordination (ACC). The ACC was responsible for overall co-ordination of UN work and sought to eliminate duplication and overlap of programme and policy activities. The ACC was meant to be a harmonizing force in the puzzling world of UN bureaucracy and in this capacity the UN had deferred nutritional arrangements to it. The landmark context of this discussion was the revolutionary way in which the agencies envisaged future working arrangements with nutritionists. Specifically, the administrators looked forward to a group that would consist of "senior officers" who would aim to develop common nutritional approaches for the agencies. Most importantly, experts would enter into the equation only on an ad hoc basis to solve a particular problem and offer necessary advice to the group.³² The change implied would be nothing less than monumental and was sure to upset the nutrition experts.³³ For the first time in the history of the agencies, the role of nutrition experts in the hierarchy was being delegated a position well below the administrators. Although the PAG had been acknowledged as only an advisory group, its spheres of influence had been immense and often times PAG views had become policy since its expertise had gone unchallenged. If the agencies took experts out of the month-to-month struggles with nutritional issues and instead decided to call on them only when they were needed, the prestige of nutritional expertise would fall considerably.

In October 1975, inspired by the recent kerfuffle with the PAG and the World Food Conference resolution V calling for improved inter-agency co-operation in five

³⁰Ibid.

³¹M. R. Sacks, 'Note for the record', summary of meeting on 3 July 1975, WHO Archives, box A.1162, folder 1. Mahler from WHO, Boerma from FAO, Moe from Unicef, and Hoffman from the Bank were present at this discussion.

³²Ibid.

³³In unrelated correspondence months earlier, Béhar commented to Ganzin on the need to be able to provide ongoing technical support rather than periodic "groups of experts". M. Béhar, letter to M. Ganzin, 28 February 1975, FAO Archives, registry files, NU 1/8, 1/9.

main nutritional areas, an ACC preparatory committee met to discuss institutional nutrition plans.³⁴ The first item of business was to determine why, "despite overwhelming moral imperatives" for activities to eliminate hunger and malnutrition, national governments and the UN had not yet produced a reasonable strategy for achieving these ends.³⁵ Three key excuses were provided. First, the committee noted that only during the previous few years had it been acknowledged that protein had been hyper-emphasized to the detriment of the "real" problem, food supply.³⁶ Apparently, if not for the considerable emphasis on protein, much headway would have been made. Secondly, and perhaps most importantly, efforts had been stymied by the sheer complexity of the solutions required. Since the primary cause of malnutrition was poverty, the permanent panacea could only be the raising of income levels. The major initiatives taken had been in the area of increasing the food supply without much consideration for the distribution of the food among social strata.³⁷ Thus, progress had not been realized. Lastly, governments had failed to set national nutrition targets on their national agenda.³⁸ Despite the push for planning with consideration of nutrition needs, nutrition had been side-stepped. The elusive solution could only be addressed, according to the committee, "through an integrated, interdisciplinary inter-agency approach" which, it wryly commented, would necessarily involve "all the difficulties of organization and management that it entailed."³⁹ The immediate goal had to be the establishment of a common approach within the UN agencies as well as with national and local governments.⁴⁰ The role of the PAG in these efforts was highly questionable. The committee members agreed that the PAG "might continue to exist with more limited terms of reference" or could be expanded to include all branches of nutritional expertise.⁴¹ The lack of interest in either of these avenues suggested that the elimination of the PAG would be the most favourable option. Ganzin, the FAO

³⁴The WFC was also considering the main elements of an overall nutritional programme for the UN agencies that would include the five areas recommended by the World Food Conference. Those areas were: feeding programmes, world-wide nutrition deficiency control programme, a nutrition surveillance system, national food and nutrition policy assistance programme, and an applied nutrition research programme. John Hannah (Executive Director of World Food Council), letter to Labouisse, 24 July 1975, WHO Archives, box A.1162, folder 1.

³⁵'Institutional arrangements relating to nutrition', 13 October 1975, Unicef Archives, CF-NYHQ-05ANS-002, p. 1.

³⁶Ibid.

³⁷Ibid.

³⁸Ibid.

³⁹Ibid., p. 2.

⁴⁰Ibid.

⁴¹Ibid., p. 3.

head of nutrition, was apparently not held in the highest regard by WHO administrators since they did not even wish to raise these institutional issues with him. Sacks and others at WHO felt that such discussion on ACC issues might be "counter-productive" in part because of "various pulls and stresses within FAO, and personality difficulties".⁴²

Throughout 1976, it became increasingly clear to the PAG secretariat, members, and chairman, that there would not be enthusiastic support for the group's perpetuation. In the spring, the ACC presented a report to the UN Economic and Social Council regarding future institutional arrangements for nutrition. This ACC report had been requested at the World Food Conference of 1974 and was tacitly recognized as the final word on the PAG. The recommendations reflected an optimistic tone regarding the nature of future projects, and the knowledge then in hand. According to the ACC, the World Food Conference had "crystallized the thinking about nutrition specialists and administrators, and provided an over-all framework for action in priority areas...to promote a durable solution to the nutrition problem."⁴³ The key to this solution was governmental nutrition and food policies designed in partnership with UN agencies.⁴⁴ The report recommended the formation of a sub-committee on nutrition which would "harmonize assistance" through strong agency representation and consultations with member governments. The sub-committee was envisaged as the place where the agencies would present their tactics on nutritional issues in order to foster "compatible decisions".⁴⁵ As far as the PAG was concerned, the ACC suggested that a "nutrition advisory panel" would succeed the PAG and provide advice, when requested, to the sub-committee on nutrition.⁴⁶ The recommendations were worded with surgical precision and virtually regarded the disassembly of the PAG as a foregone conclusion.

Cravioto and others at the PAG were furious over the ACC comments. Cravioto wrote the heads of the PAG sponsoring agencies that the recommendations were "ill-considered and potentially harmful to the cause of eradicating hunger and malnutrition in the world".⁴⁷ The recommendations, he believed, provided the illusion

⁴²Sacks, *op. cit.*, note 4 above.

⁴³'Food problems, institutional arrangements relating to nutrition: statement of the Administrative Committee on Co-ordination', 28 April 1976, E/5805, paragraph 11.

⁴⁴*Ibid.*

⁴⁵*Ibid.*, paragraph 32.

⁴⁶*Ibid.*, paragraph 38.

⁴⁷Joaquín Cravioto, letter to PAG Sponsoring agency heads regarding institutional arrangements relating to nutrition, statement of the ACC, 7 June 1976, FAO Archives, I. organizational PAG membership 1/4.

that great progress could rapidly be made to banish malnutrition and was in fact being made.⁴⁸ Since the PAG had not been consulted, Cravioto was livid and asserted that the new arrangements represented a "backward step".⁴⁹ Since the PAG had hardly been consulted for anything since Scrimshaw's tenure as chairman, this purposeful oversight on the ACC's part could barely have been surprising.

In spite of his anger over the behind-the-scenes dismantling of the PAG, the development that truly angered Cravioto was the new manner in which nutrition experts were slated to interact with the UN agencies. At a time when a multi-disciplinary approach to nutrition was being embraced, the ACC appeared to seek specialized and fragmented nutritional activity. Cravioto worried that the nutrition advisory panel for the sub-committee on nutrition would not be "consistent with serious efforts to solve complex and rapidly changing problems."⁵⁰ For the first time, the UN agencies were effectively producing a framework that reflected their estimation of nutritional expertise. Cravioto and his colleagues perceived the change and felt that even if the PAG had to cease activities, another inter-disciplinary group of experts should be available to advise the UN agencies.⁵¹ Thus, whereas the PAG could communicate directly with agency heads, under the new arrangements nutritionists would be several steps removed from the programmes and policies they wished to sway.

In September 1976 at the PAG intersecretariat meeting, Cravioto announced his resignation, which he deemed appropriate given the new stage the PAG was then entering. According to the restrained minutes from the meeting, Cravioto expressed his "dissatisfaction" with the turn of events during the previous year and in part blamed the sponsoring agencies for not requesting advice from the group.⁵² In return, FAO and WHO representatives mentioned they had been dissatisfied themselves with the PAG for several years but were, nevertheless, willing to fund it through 1977 in an attempt to resolve their problems.⁵³

⁴⁸Ibid.

⁴⁹Ibid.

⁵⁰Ibid.

⁵¹Ibid. See also: Asok Mitra, 'Draft statement on E/5805 from the PAG', May 1976, FAO Archives, organizational PAG membership 1/4.

⁵²PAG intersecretariat meeting, New York, 28 and 30 September 1976, confidential draft minutes', 18 October 1976, FAO Archives, NU 13/3 - 13/4.

⁵³Ibid. This meeting was fairly procedural in nature. The more open (and undoubtedly severe) meeting of the bilateral agencies on 1 October was conducted in closed session with no record made.

Emergence of the ACC/SCN

If a single year might be identified as containing the major alterations to UN institutional arrangements for nutrition, it was 1977.⁵⁴ In April 1977, the ACC provided the UN Economic and Social Council with a supplement to its early recommendation on nutrition co-ordination. This document stated unequivocally that the PAG would cease functioning at the end of 1977 and that an Advisory Group on Nutrition (AGN), consisting of five or six members, would serve as its replacement.⁵⁵ The AGN was expected to: respond to requests for advice from the Sub-Committee on Nutrition (SCN), bring important issues to the SCN's attention, help carry out the SCN's programme of work, and maintain contacts in the scientific community outside the UN agencies.⁵⁶ The SCN would direct requests at individuals or small groups within the AGN as required; the whole AGN was not expected to flesh out every request. If needed, outside consultants would be enlisted to respond to specific problems outside the scope of the AGN's competence. Many scientists, among them Waterlow, had expressed the contention that the AGN experts should be full members of the SCN in order to maintain their clout.⁵⁷ There would, however, be no question about who was holding the reins in this new arrangement: the SCN would set up AGN meetings, appoint members, and service their meetings.⁵⁸ The AGN was to be, in essence, a "problem-solving group", with the capability of independently bringing certain matters to the attention of the SCN.⁵⁹ The SCN was accountable to the ACC and was expected to gather twice per year and "to keep under review the over-all direction, scale, coherence and impact of the United Nations System response to the

⁵⁴At Unicef, Teply was sufficiently inspired by the churn of changes that he made a note of them in September 1977. He optimistically believed that the invigorated efforts at co-ordination would result in Unicef spending a good deal more of its \$150 million income on nutrition. L. J. Teply, 'Nutrition in the UN system', 16 September 1977, Unicef Archives, CF-NYHQ-05ANS-002.

⁵⁵'Institutional arrangements relating to nutrition, supplementary statement by the Administrative Committee on Co-ordination', 26 April 1977, E/5968, in *PAG Bulletin*, September-December 1977, VIII(3-4), 17-20, on p. 17. This, the final issue of the *PAG Bulletin*, provides copies of a number of the key documents involved in the demise of the PAG and birth of the SCN and AGN.

⁵⁶The SCN was officially known as the Sub-Committee on Nutrition of the ACC (ACC/SCN). For simplicity's sake, I refer to it only as the SCN. 'Report on the new institutional arrangements in the UN system for nutrition, Second Session of the Ad hoc Committee on Food and Nutrition Policies, Rome, 6-10 March 1978', January 1978, Scrimshaw personal collection, Document ESN: FNP/78/7, p. 3.

⁵⁷J. C. Waterlow, interview, 22 June 1995.

⁵⁸'Institutional arrangements relating to nutrition', op. cit., note 55 above, p. 19.

⁵⁹'Unicef Information Bulletin', July 1978, Unicef Archives, CF-NYHQ-05ANS-002, p. 3.

nutritional problems of the world."⁶⁰ The creators of the SCN intended that it should be the "point of convergence" for attempts to co-ordinate nutrition initiatives, especially those relating to resolution V of the World Food Conference.⁶¹ A dozen UN agencies attended the first meetings late in 1977.⁶² As had been the case with the PAG, sponsoring agencies with serious interest in nutritional concerns would fund the SCN and AGN. The initial budget was set at the level of the last PAG budget: \$300,000.⁶³ The UN Economic and Social Council approved these measures in August 1977 and the SCN had its first meeting in September. FAO in Rome was appointed the seat of the SCN and mid-way through 1978, the SCN secretariat began its functions.⁶⁴

The first SCN meeting consisted mainly of top administrators from the agencies. Heyward, the first chairman of the SCN, came away from the meeting and its follow-up with the sense that "harmonisation" of approach was an immense field which was better discussed by the SCN than by some outside expert group.⁶⁵ He and

⁶⁰'Report on the new institutional arrangements', op. cit., note 56 above, p. 1.

⁶¹The World Food Council was one co-ordinating apparatus that had sprung from decisions at the World Food Conference and which might ostensibly have taken a broad role in nutrition. It was the only inter-ministerial body in the UN system to take up nutrition issues. However, it was a food council and most of its members were ministers of agriculture and were not informed on nutritional subjects. After its third session in 1977 in Manila, WHO's representative and regional adviser on nutrition, H. J. L. Burgess, noted that "The WFC seems to be still feeling around for its role...and has not yet determined how to carry out its coordinating role." H. J. L. Burgess, 'Report on attendance at the third ministerial session of the World Food Council, Manila, 20-24 June 1977', 11 July 1977, WHO Archives, box A.1162, folders 2 and 3, p. 3. Burgess caustically remarked that when the Nigerian delegate asked what WFC was doing that other agencies, such as FAO, could not do, a substantive response was not provided. (p. 3) The issues raised at the session had been dealt with at other conferences and, according to Burgess, the recommendations which emerged concerned "semantics rather than substance." (p. 3) These observations highlight the flaws which characterized co-ordination efforts within the UN and show that the WFC was not close to addressing nutritional policy co-ordination. The UN agencies had presupposed that the WFC would not play the central role on nutrition co-ordination. For a description of how the WFC envisaged its role in food and nutrition see: 'Policies and programmes to improve nutrition', report by the executive director at the World Food Council third session in Manila, Philippines, 20-24 June 1977, document number WFC/41, 25 March 1977, LSHTM Archives, World Food Council box, paragraphs 85-87.

⁶²'Report on the new institutional arrangements', op. cit., note 56 above, pp. 1-2. 14 agencies, a sign of the rebirth of nutritional interest in the UN, attended the third session. The agencies were: UN Department of Economic and Social Affairs, UN Office for Inter-agency Affairs and Co-ordination, UN Educational, Scientific and Cultural Organization, WHO, World Bank, Unicef, FAO, UNDP, WFP, UN University, UN Environment Programme, WFC, International Labour Organization, IFAD. 'Unicef Information Bulletin', op. cit., note 59 above, p. 1.

⁶³'Institutional arrangements relating to nutrition', op. cit., note 55 above, p. 19.

⁶⁴'Institutional arrangements relating to nutrition, a chronology of events and main documents', 26 April 1977, E/5968, in *PAG Bulletin*, September-December 1977, VIII(3-4), pp. 2-3.

⁶⁵E. J. R. Heyward, letter to G. O. Kermode (Acting director of Food and Policy Division at FAO), 18 November 1977, FAO Archives, LL-011.

his colleagues were exceedingly weary of the advice of experts, especially at the initial stages of a new sub-committee. Heyward had a birds'-eye perspective on the motives for its establishment. When considering the changes that the formation of the SCN would represent, Heyward believed that

the fundamental thing was to reverse this relationship [between experts and policy makers]...instead of the agencies sitting around listening to these scientists it was the agency people responsible for nutrition in their various agencies who were the main committee; the SCN and the scientists were in an advisory group on nutrition which was sitting with the agencies, but it was the agency people in the top position rather than in a listening position.⁶⁶

Berg from the World Bank had considerable influence over the set-up of the SCN and, with Heyward and others, ensured that bilateral agencies such as the U.S. Agency for International Development and its counterparts in Europe would have representation (though they could not be full-fledged members). At least initially, the SCN breathed new life into inter-agency nutrition conversation as personnel had the opportunity to speak about nutrition rather than the usual "turf and procedures".⁶⁷ Whereas Heyward had felt that most agencies had ignored the analyses and recommendations of the PAG, he found that the SCN was regarded much more highly from the start, no doubt due in part to the position of big policy makers like himself.⁶⁸

Within a year of its establishment, the SCN assumed a very practical outlook on nutrition progress and problems. The members in 1978 noted that there were massive problems in the positions so far taken regarding nutrition in developing countries. They remarked that the endeavours of the UN system required "marked improvement" especially since its role had "largely been one of exhortation" of member countries. At meeting after meeting the UN agencies called on member governments to adopt food and nutrition priorities in their national development plans, commit to major improvements, and display their political resolve to take action. At the same time, in the view of the SCN members, the UN itself had failed to prioritize nutrition in a like manner.⁶⁹ Thus, the SCN's primary role was simply to boost the

⁶⁶E. J. R. Heyward, interview, 14 September 1995.

⁶⁷Ibid. Some continuity between the PAG and AGN was maintained. Sol Chafkin, the last chairman of the PAG, served as the first chairman of the AGN. Alan Berg, interview, 12 June 1996.

⁶⁸Ibid.

⁶⁹'Harmonized policies of United Nations agencies for collaborating with developing countries in improving the state of nutrition', proposed draft report from ACC to ECOSOC (ECOSOC Res 2107(LX111)), 12 October 1978, FAO Archives, LL-011, p. 2.

position of nutrition across the UN agencies, not to be a field programmer.⁷⁰ In the words of Leslie Burgess, the SCN's first secretary, the technical agencies "wished the SCN to be practically invisible. Anything seen in the countries would be FAO, WHO, or another agency, not SCN."⁷¹

The first two years of the SCN were spent mainly on administrative concerns and on broadly defining the nutritional priorities of the UN agencies. In 1978 the SCN reported that there was then "substantial agreement among the agencies about approach and policy in support of national actions in the field" and provided the WFC with a document about actions that governments could take to improve nutrition.⁷² The matters pursued by the committee included nutritional surveillance, the global food and nutrition situation, nutrition programmes and planning.⁷³ Further, the SCN was attempting to highlight the major constraints on faster progress in nutrition particularly in the following areas: information for policy makers, the utility of nutrition targets, support from the agencies, the lack of qualified personnel, and the lack of community participation.⁷⁴ By the end of 1978, it was hoped that the SCN would begin providing the agencies with advice which would inform and direct their nutrition policies.⁷⁵

⁷⁰At FAO, where nutrition expenditures were worryingly low, the establishment of the ACC/SCN inspired the FAO Conference to adopt a pro-nutrition stance. See: *Report of the Nineteenth Conference of FAO, 12 November - 1 December 1977*, Rome, FAO, paragraphs 114, 116, 204.

⁷¹Leslie Burgess, interview, 29 May 1996.

⁷²'Actions of the ACC sub-committee on nutrition and its advisory group on nutrition, annex 1', in 'Harmonized policies of United Nations agencies for collaborating with developing countries in improving the state of nutrition', proposed draft report from ACC to ECOSOC (ECOSOC Res 2107(LX111)), 12 October 1978, FAO Archives, LL-011, p. 1. Also: 'Unicef Information Bulletin', op. cit., note 59 above, p. 3.

⁷³'Unicef Information Bulletin', op. cit., note 59 above, p. 3.

⁷⁴'Actions of the ACC sub-committee', op. cit., note 72 above, p. 2.

⁷⁵'Report of the Unicef Executive Board', May 1978, E/ICEF/655, paragraph 145. It was not before 1979 that the SCN began to take on more visible responsibilities and have a more prominent voice in the agencies. 'Progress achieved in the field of nutrition under the new institutional arrangements: report of ACC', 10 April 1979, E/1979/43. Béhar never felt that the SCN had tangible influence on nutrition at WHO. In his words, "We may have been in agreement or in disagreement [with SCN policy], but it had no significant influence, even if we could do what they were recommending it didn't matter for us, because it was not really a group that had any authority or influence on the programming and the planning of the work of the organization." Moisés Béhar, interview, 29 December 1995.

Nutrition, Infection, and Primary Health Care

With the passing of the protein crisis and widespread acknowledgement that adequate food intake, not protein, was the most serious global nutrition problem, nutrition and infection resurfaced as a promising area for health intervention. In a statement emblematic of the search for incorporating nutrition into horizontal national programmes, Dr. Michael Latham of Cornell University asserted that the key problem in contemporary nutrition programmes was that they were engaged independently of communicable disease control projects. Given the established synergism between nutrition and infection, Latham claimed that "It would be much more efficient and effective if the twin problems [nutrition and disease] were attacked together."⁷⁶ He further argued that medically-trained personnel in the field could provide health services in family planning, nutrition programmes, and maternal and child health care which together would have a marked effect on infant mortality rates and malnutrition.⁷⁷

At least in one major trial, the Narangwal Nutrition Study, Latham's hypothesis did not find scientific support. Between 1968 and 1973, Johns Hopkins University conducted investigations of the interactions of malnutrition and infection in ten villages in North India. This intervention study built on lessons learned from INCAP's similar studies during the previous decade and produced conclusions important for future health and nutrition programmes. The investigators, including Scrimshaw's long-time collaborator, Carl Taylor, had hoped that they would be able to show that combined nutrition and medical care programmes could improve health synergistically, much in the same way malnutrition and infection had been shown to harm health. As INCAP had done in Guatemala, the group provided four groups of villages the following services: 1)no intervention (control), 2)medical treatment of infections and other childhood illnesses, 3)nutrition services including anthropometric surveillance, food supplementation, and nutrition education, and 4)nutrition services and medical treatment.⁷⁸ The study found that both medical treatment and nutrition services significantly lowered mortality. The most cost-effective nutrition intervention appeared to be prenatal nutritional supplementation while for post-weaning children,

⁷⁶Michael C. Latham, 'Nutrition and infection in national development', *Science*, 9 May 1975, 188(4188), 561-65 on p. 561.

⁷⁷*Ibid.*, pp. 564-65.

⁷⁸Arnfried A. Kielmann, Carl E. Taylor, Robert L. Parker, 'The Narangwal nutrition study: a summary review', *The American Journal of Clinical Nutrition*, November 1978, 31, 2040-2052, on p. 2042.

services which included nutrition education, growth monitoring, and nutrition supplementation were best suited to lowering mortality and improving nutritional status.⁷⁹ From the medical perspective, the most cost-effective programme for lowering mortality was morbidity surveillance and early treatment of illness. This medical intervention was more effective in reducing infant mortality than the nutritional approach.⁸⁰ Contrary to expectations, the results did not indicate that the combined programmes generated a greater effect than if the components had been implemented alone. Nevertheless, a financial analysis of the programmes revealed that there was little added cost required to develop and implement a combined medical-nutritional programme versus a traditional, independent project. In an effort to make research more practical, financial realism had definitively entered the scope of scientific examination. The minor cost incurred to reap the rewards of both services was ultimately the major justification the investigators provided for embarking on these programmes.⁸¹ In other words, nutritional work might as well be conducted alongside medical programmes since the added cost was relatively small.

For practical applications, the results of the Narangwal study importantly showed that nutrition programmes had a greater effect on growth than medical care, but a lesser effect on mortality than medical care directed at infection control.⁸² From these data and other studies, a scientifically-based foundation for medical programmes that included nutrition was developing. Perhaps the most influential study similarly designed along these lines was Leonardo Mata's meticulous child health investigation in the Guatemalan village of Santa María Cauqué. Unlike the Narangwal investigation, Mata's was an observational epidemiological study which sought to further clarify the relationship between malnutrition and infection. For nine years, beginning in 1963, Mata, then the chief of the INCAP Division of Environmental Biology, painstakingly collected extensive health data about the children of this highland Guatemalan village. Santa María de Cauqué had earlier been the treatment village in the three-village study by INCAP during the 1950s.⁸³ Mata had carefully

⁷⁹Ibid., pp. 2051-52.

⁸⁰Ibid., p. 2052.

⁸¹Ibid., p. 2051. For a fascinating and provocative historical exploration of this study and others, see: Ann G. Carmichael, 'Infection, hidden hunger, and history', in Robert I. Rotberg and Theodore K. Rabb (eds), *Hunger and History: The impact of changing food production and consumption patterns on society*, Cambridge, Cambridge University Press, 1985, pp. 51-66.

⁸²Ibid.

⁸³See Chapter IV of this dissertation and Nevin S. Scrimshaw, Moisés Béhar, Miguel A. Guzmán, and John E. Gordon, 'Nutrition and infection field study in Guatemalan Villages, 1959-1964: IX. An

examined that field work, and after training at Harvard School of Public Health and digesting the data collected on nutrition and infection by Scrimshaw, Gordon, and Taylor, he embarked on an innovative field study of his own.⁸⁴ According to Mata, his research was designed with every intention of generating practical health and nutrition programmes. In his words, the motivation for the project

was the conviction that a thorough understanding of the nature, causation, and magnitude of disease processes would provide the scientific foundation for the design, implementation, and evaluation of immediate and long-term action programs directed toward a specific attack on identified problems. Development planners would thus have information which they could use to convince and convert local and foreign intellectuals and political leaders to the desirability and advantage of action in accordance with observed facts.⁸⁵

From foetal development through the pre-school years, Mata observed the impact of maternal practices, weaning, and the environment on childhood health. By examining the minutiae of childhood health, he determined that gastrointestinal infection was the major culprit for damaged intestinal mucosa and related malabsorption.⁸⁶ Since the children were not especially malnourished from the start, Mata concluded that infection played a major part in the development of malnutrition.⁸⁷ Thus he deduced that rational medical programmes -- such as treatment of infection and immunization -- would reduce mortality from PCM, diarrhoeal dehydration, and infectious diseases such as measles and tetanus.

Mata's analysis did not end here, however, and he presented a perspective wrought with all the complexities that further complicated the picture policy makers had of the measures which could be taken to improve childhood health. Mata importantly noted, for example, that while medical measures could highlight the need for prevention, "the overall effect of such programs in terms of reducing frequency of disease is limited."⁸⁸ Furthermore, and here he must have frustrated vertical health

evaluation of medical, social, and public health benefits, with suggestions for future field study', *Archives of Environmental Health*, January 1969, 18, pp. 51-62.

⁸⁴While his data were widely published and presented, his book on the subject presents the most compelling and eloquent view of the study. Leonardo J. Mata, *The Children of Santa Maria Cauqué: A Prospective Field Study of Health and Growth*, Cambridge, Massachusetts and London, The MIT Press, 1978, p. 4.

⁸⁵*Ibid.*, p. 3.

⁸⁶*Ibid.*, p. 322.

⁸⁷*Ibid.*, pp. 322-23.

⁸⁸*Ibid.*, p. 325.

care promoters, he grimly stated that "Unaccompanied by community development, they [medical measures] contribute to survival of children who often are poorly conditioned to function optimally and yet are a factor in demographic growth and perhaps a burden to society."⁸⁹ While Mata painted a discouraging canvas of childhood health and its relation to nutrition, he did manage to compile a list of actions which he believed would result in significant, lasting health improvements. Among his recommendations were:

- increase in volume of household water to reduce attack of diarrhoeal disease
- increase in number of household beds to reduce attack of respiratory disease
- immunization against measles, whooping cough, tuberculosis, and tetanus
- health services for treatment of acute infectious disease
- agrarian reform
- education in weaning practices and nutrition
- family planning
- improvement of wages⁹⁰

Most of these measures figured prominently into the evolving view of primary health care concerns and highlight the ever-shrinking role seen for strictly nutritional interventions as means for improving nutrition.⁹¹

Mata's view, which favoured the role of infection in the onset of malnutrition, was not accepted across the board. Béhar, who was running INCAP at the time of Mata's study, presented the other perspective. To him, Mata was playing the role of the "infectologist" while most of the other staff members at INCAP were more the "nutritionists". Béhar stated that Mata "was always saying 'the important things are the microbes', and we were always saying 'no, the important things are the defenses of the organism'".⁹² Although Mata came away from the study on Santa María de Cauqué with a viewpoint which decidedly emphasized the role of infectious disease,

⁸⁹Ibid.

⁹⁰Ibid., modified slightly from list on p. 329.

⁹¹Highlighting the supreme and enduring importance of Mata's study, Scrimshaw wrote in 1995 that "It provides the most detailed information of the ecology of infectious disease in a community ever obtained and stands as a model of intensive longitudinal health-related research." Nevin S. Scrimshaw, 'Introduction', in Nevin S. Scrimshaw (ed), *Community-Based Longitudinal Nutrition and Health Studies: Classical Examples from Guatemala, Haiti and Mexico*, Boston, International Foundation for Developing Countries, 1995, p. iv.

⁹²Moisés Béhar, interview, 29 December 1995.

his peers, while not necessarily contradicting him, were unable to lend full support. Béhar summed up the indecision of the nutritionists: "actually the whole field work [three- and four-village studies and Santa María Cauqué], it attempted to define the role of these two factors, which in a way was very useful, but it proved that you cannot identify a single factor in isolation without seeing its interaction with the others. They don't act independently".⁹³

For nutritionists and policy makers, the complexity of the interactions between nutrition and infection made prioritization in health schemes a daunting prospect. Béhar had spent over three decades at the crossroads of scientific investigations and practical applications, yet his conception of action was hardly concrete: "when it comes to prevention, well, the simplest approach is to vaccinate children, but when it comes to common diarrhoeas there is no vaccine, when it comes to common respiratory infection there is no vaccine, and then we have the question, what do we do first?"⁹⁴ The answer to Béhar's question was sought by all, though clearly, in the end, the final judgment would be in the hands of the UN administrators.

Although these studies and others are widely cited in the technical literature, it is difficult to gauge how great a role they played in shaping nutrition policies.⁹⁵ However, the policies being developed by WHO and Unicef at the time suggest that regardless of the effect of these studies on specifically nutrition interventions, they did generally emphasize the positive role of disease control and primary health care services. After decades of hearing from nutritionists that hunger and malnutrition were the greatest problems facing people in the developing countries, these studies suggested that disease, and its prevention, might be the best means of attack. Certainly no one argued with the premise that, in ideal circumstances, projects should encompass both nutrition and medicine. In the practice of policy, however, it was unclear just where emphasis would be placed.

Flow Diagrams and Nutrition Planning

Since W.W.II, the UN agencies had consistently applied one type of nutritional planning or another to their attempts at nutritional improvement. The base logic in

⁹³Ibid.

⁹⁴Ibid.

⁹⁵The historical and continuing scientific import of these studies and a few others, however, has recently been illustrated in: Nevin S. Scrimshaw (ed), *Community-Based Longitudinal Nutrition and Health Studies: Classical Examples from Guatemala, Haiti and Mexico*, Boston, International Foundation for Developing Countries, 1995.

support of nutrition planning called for surveys to identify dietary deficiencies followed by appropriate programmes to correct them.⁹⁶ During the late-1960s, newer planning techniques, often academic in form, were being designed to approach a variety of problems. Several development economists and nutritionists began theorizing that such a tact could well be utilized to address hunger concerns. Berg in 1973 quipped that these "Systems practitioners tend to produce flow charts reflecting the relationships of everything to everything, the result being something more akin to a Jackson Pollock canvas than to a useful planning chart."⁹⁷ In a sign of the times, the last meeting of the Joint FAO/WHO Expert Committee on Nutrition late in 1974 dealt solely with the role of food and nutrition strategies in national development and placed these "systems practitioners" on a pedestal.⁹⁸ This was the first instance when the committee tackled a non-technical issue, a profound reflection on the way in which nutrition had visibly bounced out of the scientific realm, and into the political forums. McLaren later asserted that this committee's focus had "pander[ed] to the obsessive concern with policy making and planning evident in nutrition as in other circles in recent years."⁹⁹ At the meeting, the old guard was on hand in the form of Teply, Gopalan, Bengoa, Demaeyer and others, and was joined by the then influential planners Leonard Joy and Philip Payne. Joy was an economist from Sussex, and Payne was a nutritionist from the LSHTM. The two had first met in 1971 and subsequently began designing theoretical models for implementing multi-sectoral governmental nutrition planning. According to Payne, FAO and WHO showed exceptional interest in their ideas since there had been

a degree of disenchantment in the earlier ideas of nutrition interventions which were very much based on vertical types of programmes.

⁹⁶Common sensically, any time one was considering a community's nutritional needs and methods for improvement, one was engaged in "nutritional planning". Based on this premise, Quinn has traced nutrition planning in Malawi back to the mid-1930s. Although this frames the majority of nutritional work in a planning context, it was not until the late-1960s that the contemporary structures associated with planning – theoretical models, flow charts, and other diagrammatic representations – and the term itself were commonly used. See: Victoria J. Quinn, *Nutrition and National Development: An evaluation of nutrition planning in Malawi from 1936 to 1990*, Den Haag, CIP-Data Koninklijke Bibliotheek, 1994, pp. 134-40.

⁹⁷Alan Berg, *The Nutrition Factor: Its Role in National Development*, Washington, D.C., The Brookings Institution, 1973, p. 238. These criticisms aside, Berg asserted that in other disciplines successful and rational planning tactics were being used which should be fashioned for nutritional concerns. In the short-run, his desires would not be met. (p. 200)

⁹⁸This was not to be the last meeting of the Committee for all time since it was reconstituted in 1990. *Directory of FAO Statutory Bodies and Panels of Experts*, Rome, FAO, 1994, p. 78.

⁹⁹D. S. McLaren, 'Nutrition planning day dreams at the United Nations', *The American Journal of Clinical Nutrition*, August 1978, 31, 1295-99, on p. 1295.

Agencies had been looking around for magic bullets for a while, putting lysine in flour, and there was great interest in trying to devise ways of improving welfare generally and hence food consumption and nutrition. They wanted to get away from supplementation and toward consumption.¹⁰⁰

Joy and Payne were not alone in their pursuance of multi-sectoral nutrition planning, but they were extremely prominent in FAO and WHO. A critique published a few years later provided a succinct description of their approach:

Nutrition planning covers anything and everything that is thought to impinge upon nutritional status...[it] analyses the entire 'nutrition system' and seeks to intervene, as appropriate, at any point where improvement can be postulated as important to the nutritional well-being of clearly specified vulnerable groups...The basic question asked is, how can we best remedy an observed nutritional deficiency in a particular setting? In search of an answer, one's professional gaze spans virtually the entire range of public policies, resources, and constraints that might apply.¹⁰¹

The committee listened carefully to Payne's and Joy's advice and ultimately presented three elements of food and nutrition strategies deemed essential to nutritional progress.¹⁰² The first, and allegedly most important, involved boosting rural production of foods in such a way that more equal income distribution was promoted. Concerns had recently heightened that improvements in GNP alone would not account for improvements in socio-economic status for the poor. On the contrary, GNP growth could be accompanied with exacerbated poverty and malnutrition among the poor.¹⁰³ Secondly, the type of foods produced and their distribution should be in

¹⁰⁰P. R. Payne, interview, 5 June 1996.

¹⁰¹John Osgood Field, 'The soft underbelly of applied knowledge: conceptual and operational problems in nutrition planning', *Food Policy*, August 1977, 2(3), pp. 228-39.

¹⁰²Among the papers presented by them at the meeting were: P. R. Payne and J. L. Joy, 'A note on the logic and terminology of planning'; P. R. Payne, 'Assessment of needs and priorities: approaches to the setting of goals and targets'; and J. L. Joy, 'Design and modification of sectoral projects and programmes in relation to achieving the targets' in 'Joint FAO/WHO Committee of Experts on Nutrition, Ninth Session', 1974, ESN: FAO/WHO/NU/WP9, items V.3(B) and (D) of the provisional agenda, LSHTM Archives, Payne papers, FAO/WHO expert committee box.

¹⁰³For the nutritionists, this development was particularly troubling. For decades they had consistently stated that the only cure for hunger and malnutrition was development. It was becoming clear that this development had to be focused on the poor lest hunger and malnutrition persist. For a broader explanation of this current see: Shlomo Reutlinger and Marcelo Selowsky, *Malnutrition and Poverty, Magnitude and Policy Options*, Baltimore and London, The Johns Hopkins University Press for The World Bank, 1976.

line with improving the nutritional status of the lowest income groups. Lastly, and here the tone shifts, "nutrition-related health activities" along with traditional nutrition intervention projects were to be emphasized.¹⁰⁴ Although food production and maldistribution remained the top concerns, these health activities, which resembled Unicef's basic services approach, were integral to the new formula.¹⁰⁵ The hallmark of the plans was a "food and nutrition planning unit" which was to be in a central governmental position and could co-ordinate and monitor food and nutritional activities and progress. This unit would hypothetically advise the various government ministries on areas where they could improve their nutrition impact and would then mark their progress in doing so.¹⁰⁶ The technical expertise of the unit would vary, as would its actual location in the governmental structure. Generally, however, the experts envisaged the nutrition unit as a governmental agency within the ministry of planning. The unit would have planners, economists, statisticians, marketing experts and others to provide the broad range of expertise required.¹⁰⁷ The expert committee even provided a diagram illustrating the hypothesized position of the unit in the governmental framework.¹⁰⁸

While WHO and Unicef were eagerly investigating the possibilities for basic services, FAO continued to see its future nutritional role burning brightly in food and nutrition planning. A year after the expert committee meeting, in 1975, FAO published a pamphlet on food and nutrition planning written by Joy and Payne which consolidated the recommendations of the expert committee and fully mapped out their complex notions.¹⁰⁹ That same year, the Food Policy and Nutrition Division requested nearly one million dollars to expand its capacity for building national nutrition policies through so-called "nutrition planning schemes".¹¹⁰ According to the division, countries had not made substantive progress against nutrition problems because they did not have necessary means to solve them and because the assistance given was not

¹⁰⁴*Food and Nutrition Strategies in National Development, Ninth report of the Joint FAO/WHO Expert Committee on Nutrition, Rome, 11-20 December 1974*, Rome and Geneva, FAO and WHO, FAO nutrition meetings report series no. 56, WHO technical report series no. 584, 1976, pp. 18-19.

¹⁰⁵*Ibid.*, pp. 35-41.

¹⁰⁶*Ibid.*, pp. 45-8.

¹⁰⁷*Ibid.*, p. 46. Greaves expanded on these notions in a chapter of McLaren's important book, *Nutrition in the Community*. J. P. Greaves, 'Role of government in nutrition', in D. S. McLaren (ed), *Nutrition in the Community*, Chichester, John Wiley & Sons, 1976, pp. 269-80.

¹⁰⁸*Food and Nutrition Strategies in National Development*, *op. cit.*, note 104 above, p. 48.

¹⁰⁹Leonard Joy and Philip Payne, *Food and Nutrition Planning*, Rome, FAO, Nutrition Consultants Reports Series no. 35, ESN: CRS/75/35, 1975.

¹¹⁰'Intersectoral food and nutrition planning', at the First session of the ad hoc committee on food and nutrition policies, Rome, 5-6 June 1975, FAO Archives, registry files NU 1/8, 1/9, p. 6.

adapted to local conditions. FAO believed that it could help prepare better action plans aligned with the countries' individual needs and abilities.¹¹¹ Between 1976 and 1980, Payne had the opportunity to work on a couple nutrition planning schemes in Sri Lanka and Ecuador. He felt that "in both instances it became apparent that countries at that level of development simply were not able to mobilize their resources, the human resources, for the kinds of analyses of problems and programme management that that approach demanded."¹¹² Evidently, Joy's and Payne's conception of nutrition planning was on a downhill trail to oblivion.

In line with WHO's and Unicef's new focus on basic services to improve nutritional status, FAO argued that nutrition might be improved most effectively by non-nutritional interventions carried out in the following sectors: "food production, marketing, and consumption".¹¹³ FAO proposed producing nutrition planning schemes that would involve participation in planning processes on governmental levels and which would leave a more powerful mark than simply submitting a proposal.¹¹⁴ Within the UN, FAO was seen as the lead agency for designing food and nutrition planning strategies. The World Food Conference had originally made this designation and the WFC continued to reinforce it.¹¹⁵ Slowly but surely, the UN agency view of food and nutrition planning was evolving. Whereas originally, food and nutrition planning involved experts telling governments what they should or should not be doing about nutrition, the new thinking called for informing governments about nutrition and bridging the gulf between medical-agricultural perspectives and planners' points of view.¹¹⁶

The very concept of nutrition planning drew venomous attacks from the man well-established by the 1970s as the nutrition critic, D. S. McLaren. McLaren believed that since the World Food Conference, grand plans for food and nutrition planning had emerged which were "shibboleths of holism that, lamentably, have gone unchallenged."¹¹⁷ To McLaren, the nutrition planners were making far too many assumptions about food and nutrition programmes that were leading them to "coining

¹¹¹Ibid., p. 3.

¹¹²P. R. Payne, interview, 5 June 1996.

¹¹³'Intersectoral food and nutrition planning', op. cit., note 110 above, p. 3.

¹¹⁴Ibid., pp. 3-4.

¹¹⁵'Policies and programmes to improve nutrition', op. cit., note 61 above, paragraphs 70-74.

¹¹⁶For a vivid and remarkable discussion of the new interactions between nutritionists, agriculturists, and planners, see: *Working Papers: Problems in Government Planning of Nutrition Policy, A conference held at the Rockefeller Foundation, 16 December 1974*, New York, The Rockefeller Foundation, 1976.

¹¹⁷D. S. McLaren, 'Nutrition planning: the poverty of holism', *Nature*, 30 June 1977, 267, p. 742.

vague neotechnologisms and drawing maze-like flow (or are they ebb?) diagrams."¹¹⁸ At the core of the matter, McLaren believed that a holistic approach to nutritional policy and programmes was unrealistic since more flexible and focused affairs in nutrition would be more successful.¹¹⁹ Although many vertical initiatives in the past had provided unimpressive results, there was, apparently, room for more practice ingrained in rock-solid scientific theory. McLaren wished to see a "return to the drawing board, not for more flow diagrams and verbal acrobatics, but for realistic piecemeal measures and sensible planning."¹²⁰

While it is difficult to detect how pervasive McLaren's thinking was in the international community, his perspective was certainly not unique and was destined to become more popular.¹²¹ In spite of the pomp of declarations to eradicate hunger through food and nutrition planning, there was a lurking sense outside of FAO that a more structured and focused effort would prove more effective than trying to get governments to embark on broad multi-sectoral plans for nutritional improvement.¹²² Primary health care was one area of concentration that held the promise for making a positive difference. Significantly, in India, massive feeding programmes were increasingly tied to basic services on a national scale by 1977. The plans -- which involved the application of basic medical and nutritional knowledge on the village level -- were emblematic of the shift away from grand solutions and toward reasonable progress. Highlighting this new approach and its spreading application, Greaves of Unicef quoted President Julius Nyerere of Tanzania as having said, "Some countries try to reach the moon: we try to reach the village."¹²³

By the late-1970s, the fad of theoretical food and nutrition planning had peaked and nutritional proponents were pursuing nutritional programmes that would

¹¹⁸Ibid.

¹¹⁹Nutrition planners were not alone in their sunny outlook for banishing hunger. Numerous food technologists and scientists believed that, in spite of the economic and political obstacles, most hunger and malnutrition would be defeated by technological advances during the next few decades. For an article on one such optimistic report, see: Colin Norman, 'To get more than enough', *Nature*, 30 June 1977, 267, pp. 743-44.

¹²⁰McLaren, op. cit., note 99 above, p. 1299.

¹²¹For a number of interesting pieces which reflect the evolution in thought about nutrition policy, see: Beverly Winikoff (ed), *Nutrition and National Policy*, Cambridge, Massachusetts and London, England, The MIT Press, 1978.

¹²²FAO continued to place increasing emphasis on food and nutrition planning. At the 1977 FAO Conference, the representatives agreed to a new strategy that would redirect FAO's nutrition work to a tight focus on food and nutrition planning. See: *Report of the Conference of FAO, 17th Session, Rome 10-29 November 1977*, Rome, FAO, 1977, paragraphs 265-275.

¹²³J. P. Greaves, 'Feeding programmes at village level', *The Indian Journal of Nutrition and Dietetics*, 1977, 14, 325-33, on p. 333.

have clear and tangible effects rapidly.¹²⁴ Discussion of hunger was toned down from the rhetoric of eradication of hunger and malnutrition to the more realistic objectives McLaren had advocated.

Nutritional Direction

Throughout the 1950s and 1960s, nutritionists had been praised by FAO, WHO, and Unicef administrators for their abilities to solve nutritional problems and to be leading personae in the battle against hunger. The rhetoric of the mid- and late-1970s depicted a striking change in attitudes. The diminished character of nutritionists and backlash from past foibles had been influencing the status of nutrition in agency divisions and board rooms since the early part of the decade.¹²⁵ It was agency opinion, however, that while the dearth of credible nutrition interventions was one major impediment to nutrition progress, the central cause was the lack of national nutrition policies or of political wherewithal to implement them.¹²⁶

At FAO, where planning had been raised to primary importance in nutrition undertakings, Ganzin requested a consultant to clarify the role of nutritionists in these projects. In the course of answering the question "Why involve nutritionists in the planning process?", the consultant provided Ganzin with a list of needs that entailed the services of a nutritionist.¹²⁷ Thus, the new nutritionist who was expected to work with agriculturists, planners, and politicians did not have the presumed greatness of

¹²⁴Quinn, in her dissertation, provided a magnificent historical overview of nutrition planning and its practice in Malawi. The UK FFHC, a branch of FAO, spent considerable time and funds during the late-1960s and early-1970s to implement a multi-sectoral nutrition planning scheme in Malawi. Quinn reported that these efforts resulted in nothing more than a couple new, empty buildings. Victoria J. Quinn, op. cit., note 96 above, pp. 134-210. For the definitive criticism of multi-sectoral nutrition planning, see: John Osgood Field, 'Multisectoral nutrition planning: a post-mortem', *Food Policy*, February 1987, 12(1), pp. 15-28. Payne readily admitted that the concept of theoretical, multi-sectoral, nutrition planning had been a serious failure. "Paradoxically," Payne noted, "it turns out that any country capable of freely launching an inter-ministerial activity probably doesn't need to do it." P. R. Payne, interview, 5 June 1996.

¹²⁵For a passionate indictment of the international system of aid and the lack of generosity on the part of governments, see: Arthur Simon, *Bread for the World*, New York, Paulist Press and Grand Rapids, WM. B. Eerdmans Publishing Co., 1975. Simon asserts that development aid in terms of assistance per person living in developing countries declined by 30% between 1963 and 1973. (p. 112) These figures may go some way to explain why UN agencies had such trouble locating real nutrition success stories.

¹²⁶See, for example: 'Report of the Unicef Executive Board', May 1975, E/ICEF/639, paragraph 118.

¹²⁷D. Calloway, letter to M. Ganzin entitled 'The role of nutritionists in food and nutrition planning', 16 May 1975, FAO registry files, NU 1/8, 1/9.

past decades. On the contrary, nutritionists would have to justify their role, albeit ironically, in planning for nutritional needs.¹²⁸

Within Unicef's own bureaucracy, major changes were at work which would alter and redirect nearly all future nutrition efforts. At the May 1974 Executive Board meeting, the Board vocalized a new vision of how basic services, including medical care and nutrition, were meshed together. The Board importantly noted that health services were "the principal means of carrying out curative measures and providing nutrition education and supplementary feeding, and they were also the sources of other protective measures which bore an indirect relationship to nutrition."¹²⁹ The basic services approach stressed the need for communities to take responsibility for the planning and management of the services which would benefit children. Since in the Board's estimation a child suffering from gastrointestinal infection was also bound to become malnourished unless treated for the infection, health services had to be expanded.¹³⁰ In a complete change of tone which reflected the heart of findings on the interactions of nutrition and infection, the Board recommended promoting the following actions through health services in the interest of nutritional status improvement: "surveillance; treatment of severe and moderate forms of malnutrition; control of infectious diseases; nutrition education; and co-operation with other local agencies."¹³¹ Evidently, the links between infection and malnutrition had achieved a strong enough scientific footing to inspire corresponding policies. From 1975 onward, the basic services approach was being presented as an integral strategy in Unicef's policies.¹³² Greaves recalled that when the basic services approach arrived from the New York Unicef headquarters,

we wondered [in India] what the hell does this mean? It was community development, it was looking at basic health needs with a focus on communities, and what sort of support you need to give to communities...it was a great deal of extra discussion; it became rather

¹²⁸Quinn argued that there were two extremes of nutrition planners, those "who view malnutrition as a technical problem which can be solved by technological solutions" and those "who view malnutrition as a societal problem which can only be solved by an attack at the structural roots of poverty." Victoria J. Quinn, *op. cit.*, note 96 above, p. 25. Joy and Payne seem to have fallen somewhere in between and felt that proper planning itself — with its various responses to malnutrition — could solve the problem. They did not advocate solutions which were specifically structural or technological in nature. Further, I believe few nutritionists or planners truly would have held up technological solutions as capable of ending malnutrition altogether.

¹²⁹'Report of the Unicef Executive Board', May 1974, E/ICEF/633, paragraph 32.

¹³⁰*Ibid.*, paragraph 32.

¹³¹*Ibid.*, paragraph 78.

¹³²'Report of the Unicef Executive Board', May-June 1979, E/ICEF/661, paragraph 150.

an empty slogan with a chapter on water, on education; it was never really acted through in the way that those who started it off hoped it would. Somehow it never really made it.¹³³

The final results of Professor Jean Mayer's study for Unicef similarly reflected the changing nature of nutrition in the agencies. Mayer and his colleagues had concluded that "nutrition should become a prime activity of Unicef--to a much greater extent than has been true in the past few years", and recommended that Unicef take action in the following areas: child nutrition advocacy, food and nutrition policy, primary health service support, local nutrition education, and nutrition emergency tactics.¹³⁴ The massive five-volume presentation, however, did not inspire any enlightening realizations and had few related ramifications. Rather, it summarized the general currents and clichés that had long been discussed by expert committees and policy makers. "No amount of attention devoted to food and nutrition policy", the study noted, "can make up for the lack of a population policy."¹³⁵ Nevertheless, the central tenet of the study was that "nutrition policy is absolutely fundamental to development and without a nutrition policy most development planning will prove to be vain."¹³⁶ Notably, Mayer and his team commented on the use of primary health care service as a means for ameliorating nutritional status. The Board took special note of this relationship, thereby setting precedence for interest in the primary health care and nutrition.¹³⁷

Although Mayer's study was overtly greeted positively, the reception seemed to subvert the study's purpose by suggesting that Unicef was doing enough on nutrition and had apropos areas of concentration.¹³⁸ Labouisse used Mayer's statistics to counter-criticize the Board's ongoing concerns over the low level of nutrition spending.¹³⁹ He noted that nutrition spending levels had usually come under fire based on the levels devoted to long-term nutrition projects which, between 1971 and 1974,

¹³³J. P. Greaves, interview, 16 February 1996.

¹³⁴Jean Mayer, *Priorities in child nutrition in developing countries*, I, E/ICEF/L.1328, 28 March 1975, pp. vi-ix.

¹³⁵*Ibid.*, p. 8.

¹³⁶*Ibid.*, p. 9.

¹³⁷'Report of the Unicef Executive Board', op. cit., note 126 above, paragraph 64.

¹³⁸Labouisse gave the report a generally positive but unenthusiastic response. 'Priorities in child nutrition in developing countries', recommendations of the Executive Director, 31 March 1975, E/ICEF/L.1329.

¹³⁹*Ibid.*, p. 17.

used between 7% and 13% of programme aid.¹⁴⁰ If the estimated nutrition portion of other projects were included, the figures would rise by roughly 3 to 5%.¹⁴¹ These figures alone would have preserved the Board's critique. However, Labouisse noted that if the value of food aid and transport were included, then the total percentage of programme aid would rise to between 23 and 37% during this time period.¹⁴² In a symbolic shift of the way in which one considered nutritional problems and their solutions, Labouisse further noted that extracting the percentage devoted to nutrition from other projects was an artificial process since most Unicef projects, such as clean drinking water and maternal and child health services, necessarily improved childhood nutrition.¹⁴³ Artificial or not, the Board continued to assert during the following years that nutrition did not receive the financial commitments it deserved.¹⁴⁴

The implications of Labouisse's commentary had the potential to alter traditional, outdated conceptions of nutritional interventions. His views, which reflected growing sentiment in the public health arena, had been formulated on a growing foundation of field experience and scientific research. Unicef, FAO, and WHO had over two decades of experience in applied nutrition, supplementary feeding, and other areas which, though poorly evaluated in general, provided a reasonable notion of what could be accomplished in these areas. Additionally, they had reports from other projects such as water and sanitation which had ostensibly been implemented for "health" but were invariably improving nutrition as well. Connecting and supporting field observations of how horizontal programmes might accomplish the most for nutritional status, was a growing body of research on nutrition and infection.¹⁴⁵

¹⁴⁰Ibid., p. 15. According to these figures, 70% of the long-term project assistance funded personnel training and applied nutrition projects. 18% targeted weaning food production, and the remaining 12% went for goitre control and vitamin A capsules. (p. 16)

¹⁴¹Ibid., p. 15.

¹⁴²Ibid., pp. 15, 17.

¹⁴³Ibid., p. 17.

¹⁴⁴In the Unicef Board reports, the call for greater nutrition funding was a mantra from the 1950s through the 1970s. See: 'Report of the Unicef Executive Board', op. cit., note 129 above, paragraph 37; 'Report of the Unicef Executive Board', op. cit., note 126 above, paragraph 68; 'Report of the Unicef Executive Board', May-June 1977, E/ICEF/651, paragraph 116. These excerpts can also be found in: 'Executive Board policy decisions, a compilation of excerpts from reports of the Board, 1974-1977', 11 May 1978, E/ICEF/L.1309/Add.1, pp. 32, 35, 36.

¹⁴⁵For a wide overview of many of the breakthroughs that had been made in nutrition and infection, including many developments not ostensibly relevant to practical nutrition programmes, see the two following pieces: C. E. Taylor, A. A. Kielmann, and C. DeSweemer, 'Nutrition and infection', in Miloslav Recheigl, jr. (ed), *Nutrition and the World Food Problem*, Basel, S. Karger, 1979, pp. 218-243 and Gerald T. Keusch, 'Nutrition as a determinant of host response to infection and the metabolic

The WHO Nutrition Unit was at the vanguard of designing nutrition activities that were co-ordinated with a "package" of services in maternal and child health, health education, and family planning.¹⁴⁶ WHO and Unicef were together advancing the idea of "basic services" which could be provided on a local level with community health workers to improve nutrition and general health. Through immunization, growth monitoring, oral rehydration therapy, health education, distribution of nutrition supplements, family planning, and other basic measures, the agencies believed projects could have tangible impact.¹⁴⁷ In 1975, WHO's World Health Assembly adopted a resolution calling for increased attention to primary health care services in developing countries.¹⁴⁸ For the administrators at the agencies, primary health care services and basic services were necessary components of national efforts to improve nutritional status. According to Dr. Ken Bailey, who was the WHO regional nutrition officer in Brazzaville, Congo during most of the decade, an important component of WHO's mandate was the strengthening of the nutrition component of primary health care. Bailey found that during the mid- and late-1970s these endeavours were "à la mode" especially in terms of actions to be taken on the village level.¹⁴⁹

Béhar, then at the helm of WHO's Nutrition Unit, had long been interested in methods for bringing nutrition interventions to the village, and he hoped to further these enterprises. He persevered and tried to orient WHO around the actions that could be taken in villages which would have substantive nutritional impact. Due to his involvement in INCAP studies, he was preoccupied with the concept of primary health care and solutions that could be pursued through the health sector. Additionally, he wished to improve interest in weaning foods, especially in areas where the local food source, cassava for example, could not sustain adequate growth. Béhar wished to ascertain how adult food could be prepared differently to meet the needs of the child. Much to his disappointment, the financial backing to support this work could not be obtained.¹⁵⁰

sequellae of infectious diseases', in L. Weinstein and B. N. Fields (eds), *Seminars in Infectious Disease*, II, New York, Stratton Intercontinental Medical Book Corp., 1979, pp. 265-303.

¹⁴⁶Joint WHO/Unicef strategy in nutrition activities through local health services', 25 March 1975, E/ICEF/Misc.243. The document enclosed in this Unicef publication is 'A guideline for nutrition activities through local health services for joint WHO/Unicef strategy', Geneva, WHO Nutrition Unit, September 1974, NUT/74.3.

¹⁴⁷Ibid.

¹⁴⁸'Promotion of national health services relating to primary health care', 29 May 1975, Geneva, Twenty-eighth World Health Assembly, WHA28.88, LSHTM Archives, WHO reports box.

¹⁴⁹Ken Bailey, interview, 1 April 1996 and 'summary curriculum vitae', Bailey personal collection, 1996.

¹⁵⁰Moisés Béhar, interview, 29 December 1995.

Closely linked to the primary health care approach were Unicef's basic services. Heyward, Labouisse, and other top Unicef administrators hoped that the basic services approach would be supported by the WFC and other UN bodies.¹⁵¹ They felt that the areas identified by the World Food Conference as requiring action were overly vertical and, according to Heyward, lacked adequate mechanisms in countries for implementation.¹⁵² Furthermore, weary of coming under the jurisdiction of yet another UN body, Heyward told the WFC that rather than feeling obligated to obtain "approval" for action plans, it would be more useful to elicit the Council's support.¹⁵³ In a summary of where Unicef was going with its basic services, Teply made the following statement which was representative of general opinion:

Unicef sees a major need for promotion of action at the country level. Rather than a number of 'vertical' programmes there should be a unifying concept for action and an adequate mechanism or instrumentality at the local level in countries. These concerns could be answered by greater attention and action at the country level through the rapid enlargement and improvement of basic services for vulnerable groups in the interrelated fields of food and nutrition, clean water, primary health care, practical education, and the advancement of women.¹⁵⁴

Unicef foresaw these services being implemented in rural, and increasingly, urban, settings.¹⁵⁵ Whereas ANP had been viewed as a programme simply for rural areas, basic services were widely viewed as being applicable everywhere. Unicef was making the same move from the country to the cities that millions of people in developing countries were making.

While primary health care and nutrition planning continued to soak up much of nutrition's limelight, the decline of breastfeeding (and related rise in infant mortality) was receiving monumental media publicity and sharpening attention from the UN agencies. Increasing the force of its rhetoric, in 1975 the Unicef Executive Board suggested that breastfeeding receive critical attention and that consideration be given

¹⁵¹E. J. R. Heyward (acting Unicef Executive Director), letter to John Hannah (WFC Executive Director), 21 August 1975, WHO Archives, box A.1162, folder 1.

¹⁵²Ibid.

¹⁵³Ibid.

¹⁵⁴L. J. Teply, letter to D. Walton (director of FAO Office for Inter-Agency Affairs), 18 September 1975, Unicef Archives, CF-NYHQ-05ANS-001, p. 4.

¹⁵⁵See, for example: Mary Racelis Hollnsteiner, 'Basic services for children of the urban poor in developing countries', 3 April 1978, E/ICEF/L.1371. For the Unicef Executive Director's response see E/ICEF/L.1372.

to "the control of advertising of infant and weaning foods, for which it might be useful to prepare model legislation".¹⁵⁶ By 1977, the Board found the breastfeeding situation to be "alarming" and called for Unicef to play a greater role in action.¹⁵⁷ Since early in the decade, journalists and the media had been giving increasing attention to the food industries' corrupt promotional tactics, especially the role of Nestlé and other multinational companies which often sought to convince mothers that their breastmilk was inferior to a formula. It was not until the late-1970s, however, that judicial courts, protesters, and the UN agencies began to take substantive action against infant-food manufacturers operating in developed and developing countries.¹⁵⁸

Since the World Food Conference, drastically improved global food production had eased the tone of imminent disaster and provided a foundation for less emotional consideration of food and nutrition problems.¹⁵⁹ Teply was impressed that the fourth session of the WFC in 1978 produced a radically different nutrition declaration from the first such meeting. Rather than calling for the eradication of hunger within a decade, the eradication of vitamin A deficiency and endemic goitre was heralded.¹⁶⁰ At the fifth proceedings of the Western Hemisphere Nutrition Congress, appropriately titled *Nutrition in Transition*, Scrimshaw rehashed the 1973 protein recommendations debacle and concluded that "To the extent that the pendulum swung too far in emphasizing protein in the 1960s, and too far in emphasizing calories in the 1970s, it must come to a more appropriate intermediate position for the 1980s and beyond."¹⁶¹

¹⁵⁶In past years breastfeeding had warranted some attention and resulted in calls for greater publication of informational materials, but not for political action. Such action grew tremendously during the late-1970s. 'Report of the Unicef Executive Board', op. cit., note 126 above, paragraph 66.

¹⁵⁷'Report of the Unicef Executive Board', May-June 1977, E/ICEF/651, paragraph 120.

¹⁵⁸The breastfeeding formula scandal has attracted several volumes and articles already and is not easily summarized. For one of the best accounts, see: Gabrielle Palmer, *The Politics of Breastfeeding*, London, Sydney, and Wellington, Pandora Press, 2nd edition, 1993.

¹⁵⁹For an excellent presentation of the changes that had occurred in the perceptions of the world food problem, see: Radha Sinha (ed), *The World Food Problem: Consensus and Conflict*, Oxford, New York, and Toronto, Pergamon Press, 1978.

¹⁶⁰L. J. Teply, 'Notes on 4th session of the World Food Council, Mexico City, 12-15 June, 1978', 2 August 1978, Unicef Archives, 88R025, box T-006, Teply files. Perhaps a sign of the times, the agenda discussion on nutrition did not come up until many of the ministers who had wished to discuss it had left.

¹⁶¹Nevin S. Scrimshaw, '1977 W. O. Atwater Memorial Lecture; through a glass darkly: discerning the practical implications of human dietary protein-energy interrelationships', in Philip L. White and Nancy Selvey (eds), *Nutrition in Transition, Proceedings of Western Hemisphere Nutrition Congress V*, Monroe, Wisconsin, American Medical Association, 1978, 14-28, on p. 27. See also: Nevin S. Scrimshaw, 'Through a glass darkly: discerning the practical implications of human dietary protein-energy interrelationships', *Nutrition Reviews*, December 1977, 35(12), pp. 321-337. The late-1970s appeared to have provided proper temporal distance to evaluate critically the nutritional attempts of the past. For an interesting and detailed account of one highly unsuccessful protein endeavour, fish

In the then common spirit of practical hopes in relation to nutrition work, Labouisse told participants at the 11th International Congress on Nutrition, "We have to recognize that, on the subject of nutrition, there is still a certain lack of understanding regarding the problem and its solutions. There is even, in some cases, a lack of interest, a lack of commitment. Routine habits are difficult to change - and this can be true at various levels of government and in the concerned communities themselves."¹⁶² As far as the responsibilities of the UN agencies were concerned, Labouisse pragmatically remarked that it seemed the agencies were "sometimes expected to accomplish what only governments can have the political power and responsibility to do." He believed that the UN system could play its role by giving "important support in the formulation of policy, in technical advice, and by participating in the costs of launching new services."¹⁶³ Labouisse indicated that the development of local health services was vital to improving nutritional status and would soon be discussed at a major conference in Alma-Ata, USSR.¹⁶⁴

Alma-Ata

In September 1978 Unicef and WHO convened an international conference on primary health care in Alma-Ata, the capital of the Kazakh Soviet Socialist Republic.¹⁶⁵ The conference sought to formulate a clear definition of primary health care and to promote its implementation in all countries.¹⁶⁶ Alma-Ata was by no means the beginning of primary health care, but rather, it was the culmination of years of research and field work that had identified primary health care as an integral part of health improvement. Primary health care was widely viewed as a critical key to achieving WHO's recent commitment of "Health for All by the year 2000".¹⁶⁷ During

protein concentrate, see: Ernst R. Pariser, Christopher J. Corkery, Mitchel B. Wallerstein, Norman L. Brown, *Fish Protein Concentrate: Panacea for Protein Malnutrition?*, Cambridge, Massachusetts and London, The MIT Press, 1978.

¹⁶²Henry R. Labouisse, 'Address of Mr. Henry R. Labouisse, Executive Director of Unicef, at the inaugural ceremony of the 11th International Congress on Nutrition, Rio de Janeiro, Brazil 27 August 1978', August 1978, E/ICEF/Misc.303, p. 2.

¹⁶³Ibid., p. 7.

¹⁶⁴Ibid., p. 5.

¹⁶⁵For a summary of the details which led to the conference, as well as an interesting discussion of horizontal and vertical public health solutions in historical perspective, see: Kenneth S. Warren, 'Health for all by the year 2000?', in *1990 Britannica Book of the Year*, Chicago, Encyclopaedia Britannica, Inc., 1990, pp. 21-30.

¹⁶⁶'Report of the International Conference on Primary Health Care, Alma-Ata, USSR, 6-12 September 1978', September 1978, WHO Archives, box A.1401, folder 9, p. 2.

¹⁶⁷Ibid., p. 5.

a decade of international UN conferences, the planners of Alma-Ata wished to make their conference exceptionally productive, in part by planning its follow-up before the proceedings began. Pre-conference emphasis was placed on the lack of international attention the primary health care approach had received.¹⁶⁸ Alma-Ata was an enormous conference with delegations from 134 governments and 67 UN agencies, organizations, specialized agencies, and non-governmental groups.¹⁶⁹ Given the broad interest in health of the conference, and the pervasiveness of hunger and malnutrition as leading causes of poor health in the developing countries, Alma-Ata provides an event in which one can evaluate what importance nutrition had attained and the way in which the nutritional understanding had evolved.

Nutrition in name did not figure deeply into the conference's conception of primary health care which it defined as, "essential care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and country can afford to maintain".¹⁷⁰ The Conference recognized that health was inextricably tied to social and economic development and therefore had to be undertaken along with "measures such as those for the improvement of nutrition, particularly of children and mothers".¹⁷¹ The status accorded nutrition overall in the framework of primary health care remained unclear in the documentation. Béhar, then the head of WHO's Nutrition Unit, asserted that while he was serving on the preparatory committees, he was generally hopeful about the prospects for nutrition being incorporated into primary health care. In his opinion, "the importance of nutrition as a component of health was clearly recognized by everybody".¹⁷²

Was nutrition to be an integral aspect of primary health care undertakings? Or was it simply mentioned out of deference to nutritionism, a field long considered one of the most important components in plans to improve human health? The Alma-Ata Declaration itself does not shed much light on this issue since the word nutrition appeared only once in the text.¹⁷³ According to the Declaration, primary health care

¹⁶⁸Newton R. Bowles, memorandum to all field staff and regional directors of Unicef, 25 August 1978, WHO Archives, box A.1401, folder 9, p. 4.

¹⁶⁹'Report of the International Conference', op. cit., note 166 above, p. 3.

¹⁷⁰Ibid., p. 5.

¹⁷¹Ibid.

¹⁷²Moisés Béhar, interview, 29 December 1995. Years later, Béhar felt that whatever nutrition components were included were destroyed by Unicef and its vertical programmes.

¹⁷³Contemporary accounts of the Alma-Ata Conference generally do not highlight the nutritional component. For example, see: Milton I. Roemer, 'Internationalism in medicine and public health', in

itself should include measures for the "promotion of food supply and proper nutrition." (emphasis mine)¹⁷⁴ The inclusion of food in the equation was a last minute intervention that irked Béhar and his nutritionist colleagues intent on keeping the focus on nutrition's role.¹⁷⁵ Thus, nutrition was seen as an important part of primary health care initiatives, along with the other tactics recommended which included immunization against infectious disease, family planning, and provision of clean water and adequate sanitation.¹⁷⁶ As a result of this apparent de-emphasis, some nutritionists such as Waterlow never saw Alma-Ata as nutritionally very important.¹⁷⁷ The Declaration for him and many colleagues was about vaccinations and basic medical services but certainly not specifically about coping with hunger and malnutrition. At the time of the conference Leslie Burgess had been a nutrition adviser for WHO for over a decade. Although he also did not feel that nutrition was the highlight, he did view "primary health care as the vehicle which would deliver better nutritional care."¹⁷⁸ At once, then, nutrition had nothing and everything to do with the Alma-Ata conference.

While nutrition per se was not a major part of the Declaration or of the conference, underpinning the desire for primary health care was the widely-accepted notion that nutrition would thereby be improved. When viewed in this light, Alma-Ata was a revolutionary breakthrough. For Scrimshaw, for example, the Declaration represented the culmination of decades of nutritional progress. To him, the placement of nutrition second in the list of components of primary health care, well ahead of curative medicine and drugs which were in the last positions, symbolized the triumph of nutrition.¹⁷⁹ Yet this explanation alone does not justify blatant excitement for nutrition's role at the conference. The genuine import of nutrition can best be seen in the increasingly elaborated relationship between malnutrition and infection and in the holistic view of nutrition which many nutritionists and agencies were adopting.

Dorothy Porter (ed), *The History of Public Health and the Modern State*, Amsterdam and Atlanta, GA, Editions Rodopi B. V., 1994, 403-23, on pp. 416, 418-19.

¹⁷⁴'Report of the International Conference', op. cit., note 166 above, p. 10. This statement fell under point VII, number 3. of the Declaration. The Declaration is reproduced in its entirety at the end of this chapter.

¹⁷⁵Moisés Béhar, interview, 29 December 1995.

¹⁷⁶'Report of the International Conference', op. cit., note 166 above, p. 10.

¹⁷⁷J. C. Waterlow, interview, 7 June 1995.

¹⁷⁸Leslie Burgess, interview, 29 May 1996. Gopalan, among others, agreed with this perspective. C. Gopalan, personal correspondence, 2 May 1996.

¹⁷⁹Scrimshaw brought this up in interview and in speeches. Nevin S. Scrimshaw, 'Keynote address for the meeting of the pediatric research society, Kansas City', 29 April 1989, Scrimshaw personal collection, pp. 12-13 and Nevin S. Scrimshaw, interview, 26 July 1995.

Carl Taylor, who had conducted the original review of nutrition and infection with Scrimshaw and Gordon in 1959, and also headed up the Narangwal Nutrition Study, was a key architect of the planning and execution of Alma-Ata. Taylor was fully cognizant of all major research relating to nutrition and infection, including Mata's work in Guatemala. As a result of his vast knowledge of the topic, he was in an important position to promote nutrition by promoting infectious disease control and other tactics that had been shown to have a profound effect on nutritional status. Taylor was one of two outside consultants hired to work on the background documentation for the conference. According to him, the central concern of the conference organizers was to "develop a new paradigm in approach rather than getting caught up in the continuing battles between sectors and people who were concerned about protecting their own turf...we made the deliberate decision not to force the inclusiveness issue but rather to concentrate on the issues we were trying to promote."¹⁸⁰ Taylor explained that although nutrition was not "explicitly stated when it came to writing the declaration" since that was written for politicians, "certainly nutrition was in the background technical documents."¹⁸¹ He believed that the conference did attract new interest for nutrition, especially among the participants. Taylor's actions at Alma-Ata were emblematic of the impressive growth which had occurred in the nutritional realm scientifically, and its complementary results in policy.

In the months leading up to Alma-Ata, Unicef's Board reflected on its changing conception of nutrition issues. In May 1978, the Board stated:

For some time Unicef has taken the view that a broadly based solution to child nutrition problems requires concerted efforts not only to increase food supplies and improve distribution and consumption habits, but also to ensure safe and adequate water supplies, immunization, sanitation programmes and maternal and child health services, and education in health, personal hygiene and child care...Primary health care and other basic services opened up new possibilities for incorporating a variety of such activities in community programmes with considerable popular participation.¹⁸²

As far as Unicef was concerned, community-based primary health care services were a component of Unicef's overall strategy of providing basic services, and nutrition interventions fit neatly into the rubric of primary health care. This interpretation

¹⁸⁰Carl Taylor, interview, 26 June 1996.

¹⁸¹Ibid.

¹⁸²'Report of the Unicef Executive Board', op. cit., note 75 above, paragraph 142.

meshes with Greaves' perspective on Unicef policy which indicated that primary health care was "a manifestation of the basic services approach" and built on the support that had been mustered for basic services.¹⁸³ Thus, nutrition was not competing with primary health care for attention -- though frequently the Unicef Board's comments implied this -- since there was no distinction made between providing supplementary foods to kids in need and providing clean water to the community. Any primary health care-oriented action was bound in one way or another to have a positive influence on nutritional status. Since Unicef and WHO, and FAO for that matter, were all interested in improving nutritional status, it made no difference if the instrument for improved nutrition was not an overtly nutritional measure.

For the FAO, WHO, Unicef triumvirate, Alma-Ata was a point of convergence as well as divergence. As primary health care became the new doorway for health and nutritional improvement, FAO's role became obscured as these were areas that rested outside its scope of expertise. Although FAO had always been expected to help improve the world's nutrition status, its principal tools for doing so were always expected to rest soundly in food and agriculture. For WHO and Unicef, on the other hand, Alma-Ata was symbolic of a meeting point that resulted from a remarkable example of ideological co-evolution.¹⁸⁴ Although Unicef's technical expertise had improved, it was basically a non-technical agency whereas WHO was fundamentally technical. Nevertheless, both agencies more or less independently arrived at the same conclusions about the role of health in development. According to Dr. Robert Mande, a member of Unicef's Executive Board, Alma-Ata was "spoken of almost as a pilgrimage where the light dawned" since Unicef's and WHO's concerns merged on primary health care.¹⁸⁵

Hunger and Malnutrition: A Look at 1978

After all the policy haggling, declarations, clinical studies, and endless evaluations, what was the face of nutrition problems in 1978? According to widely accepted figures at the time, more than 500 million people then suffered from malnutrition. Of the fifteen million estimated childhood deaths every year, it was

¹⁸³J. P. Greaves, interview, 16 February 1996.

¹⁸⁴Robert Mande, interview conducted by Newton Bowles, 17 May 1983, Unicef Archives, interview file, pp. 13-15. This interview mentioned these concepts and led to my broader explication of them.

¹⁸⁵*Ibid.*, pp. 14-15.

believed that hunger and malnutrition had played a causative role in half of them.¹⁸⁶ The efforts in primary health care at Alma-Ata were specifically designed with an eye to diminishing (if not eliminating) these overwhelming figures. In spite of the incorporation of nutritional thought into the Alma-Ata Declaration, the loss of interest in nutrition issues and failure to incorporate nutrition into the major divisions of the technical agencies resulted, at least in the short-term, in a weak nutrition legacy. At Unicef, however, enthusiasm for nutrition was not utterly quelled, and, buoyed by Heyward, the spirit of optimism for nutritional involvement in health programmes endured.

The recommendations which emerged from Alma-Ata were based on very simple measures grounded in decades of complex nutrition and health research. While it may have appeared elementary that all people should have access to clean water to avoid illness, it required a scientific leap to conclude that provision of clean water on its own could contribute to a decline in malnutrition. Thus, most of the recommendations at Alma-Ata could, in one way or another, be tied to nutritional improvement. More than reflecting a new-found concern in nutritional issues, this further illuminated the links between nutrition and nearly all factors related to health.

Many nutritionists were, at the heart, scientists and sought answers to scientific quandaries. The attempt to improve nutritional status was far too complex to lend itself to any one solution. In this vein Waterlow often found himself at odds with Cicely Williams when she insisted that the best way to improve the nutrition of young children was to ensure they received plenty of tender loving care. She had little patience for scientific programmes designed to uncover the intricacies of hunger and malnutrition. While Waterlow agreed with her basic point, he could not support her aversion to nutrition research. In his mind, paying six staff people a scarce amount of funds over many years to elucidate nutritional issues was a mere drop in the bucket in a world overrun by hunger and malnutrition. For Williams, however, it was money that could be better spent implementing practical actions that were easily derived from observations.¹⁸⁷

¹⁸⁶These figures can be found throughout WHO, FAO, and Unicef publications. In the interest of reflecting their agency-wide interest, I here cite a report from the SCN. 'Progress achieved in the field of nutrition under the new institutional arrangements', op. cit., note 75 above, paragraph 4. For an insightful look at a number of nutritional issues caught up in the averted, but ongoing, world food crisis, see: Mary Alice Caliendo, *Nutrition and the World Food Crisis*, New York, Macmillan Publishing Co., Inc., and London, Collier Macmillan Publishers, 1979.

¹⁸⁷J. C. Waterlow, interview, 22 June 1995. For a synopsis of many of Williams' fiercest beliefs, see: Cicely Williams, 'On that fiasco', *Lancet*, 5 April 1975, pp. 793-4.

In 1978, it seemed that for the time being, a formulation of Williams' general attitude had won. Although funding for nutrition institutes continued, the status of the nutritionist expert and heed given his warnings had dropped notably. For the first time, policy makers felt comfortable taking the reins of policy and guiding it with the help of nutritionists, only when such help was required. Moreover, attitudes toward nutrition problems seemed to have taken on a realistic tint which reflected the complexities of the issues faced. Malnutrition and hunger, it was agreed, could not simply be attacked through nutrition education, food supplementation, and growth monitoring. As primary health care suggested, dozens of different types of initiatives were necessary to comprehensively improve health and nutritional status. Although there was high enthusiasm for a more horizontal approach to nutritional problems, there was by no means consensus. Due to the broad nature of nutrition and problems associated with it, a factionalization of nutrition forces could be assured, if not in the near future, then certainly in the long-term.

Declaration of Alma-Ata

The international Conference on Primary Health Care, meeting in Alma-Ata this twelfth day of September in the year Nineteen hundred and seventy-eight, expressing the need for urgent action by all governments, all health and development workers, and the world community to protect and promote the health of all the people of the world, hereby makes the following Declaration:

I

The Conference strongly reaffirms that health, which is a state of complete physical, mental and social wellbeing, and not merely the absence of disease or infirmity, is a fundamental human right and that the attainment of the highest possible level of health is a most important world-wide social goal whose realization requires the action of many other social and economic sectors in addition to the health sector.

II

The existing gross inequality in the health status of the people particularly between developed and developing countries as well as within countries is politically, socially and economically unacceptable and is, therefore, of common concern to all countries.

III

Economic and social development, based on a New International Economic Order, is of basic importance to the fullest attainment of health for all and to the reduction of the gap between the health status of the developing and developed countries. The promotion and protection of the health of the people is essential to sustained economic and social development and contributes to a better quality of life and to world peace.

IV

The people have the right and duty to participate individually and collectively in the planning and implementation of their health care.

V

Governments have a responsibility for the health of their people which can be fulfilled only by the provision of adequate health and social measures. A main social target of governments, international organizations and the whole world community in the coming decades should be the attainment by all peoples of the world by the year 2000 of a level of health that will permit them to lead a socially and economically productive life. Primary health care is the key to attaining this target as part of development in the spirit of social justice.

VI

Primary health care is essential health care based on practical, scientifically sound and socially acceptable methods and technology made universally accessible to individuals and families in the community through their full participation and at a cost that the community and country can afford to maintain at every stage of their development in the spirit of self-reliance and self-determination. It forms an integral part both of the country's health system, of which it is the central function and main focus, and of the overall social and economic development of the community. It is the first level of contact of individuals, the family and community with the national health system bringing health care as close as possible to where people live and work, and constitutes the first element of a continuing health care process.

VII

Primary health care:

1. reflects and evolves from the economic conditions and socio-cultural and political characteristics of the country and its communities and is based on the application of the relevant results of social, biomedical and health services research and public health experience;
2. addresses the main health problems in the community, providing promotive, preventive, curative and rehabilitative services accordingly;
3. includes at least: education concerning prevailing health problems and the methods of preventing and controlling them; promotion of food supply and proper nutrition, an adequate supply of safe water and basic sanitation; maternal and child health care, including family planning; immunization against the major infectious diseases; prevention and control of locally endemic diseases; appropriate treatment of common diseases and injuries; and provision of essential drugs;
4. involves, in addition to the health sector, all related sectors and aspects of national and community development, in particular agriculture, animal husbandry, food, industry, education, housing, public works, communications and other sectors; and demands the coordinated efforts of all those sectors;
5. requires and promotes maximum community and individual self-reliance and participation in the planning, organization, operation and control of primary health care, making fullest use of local, national and other available resources; and to this end develops through appropriate education the ability of communities to participate;
6. should be sustained by integrated, functional and mutually-supportive referral systems, leading to the progressive improvement of comprehensive health care for all, and giving priority to those most in need;

7. relies, at local and referral levels, on health workers, including physicians, nurses, midwives, auxiliaries and community workers as applicable, as well as traditional practitioners as needed, suitably trained socially and technically to work as a health team and to respond to the expressed health needs of the community.

VIII

All governments should formulate national policies, strategies and plans of action to launch and sustain primary health care as part of a comprehensive national health system and in coordination with other sectors. To this end, it will be necessary to exercise political will, to mobilize the country's resources to use available external resources rationally.

IX

All countries should cooperate in a spirit of partnership and service to ensure primary health care for all people since the attainment of health by people in any one country directly concerns and benefits every other country. In this context the joint WHO/Unicef report on primary health care constitutes a solid basis for the further development and operation of primary health care throughout the world.

From 'Report of the International Conference on Primary Health Care, Alma-Ata, USSR, 6-12 September 1978', September 1978, WHO Archives, box A.1401, folder 9, pp. 15-16.

Chapter IX

Looking Back and Forward

Transformations

The ideal of "freedom from hunger" was not achieved between 1948 and 1978, nor has it since become a reality.¹ The three decades of UN nutrition policy covered in this dissertation reflect the significant transformations in the content and character of the dialogue between policy makers and nutritionists, as well as the deep complexities of the hunger problems they addressed. Far from ending hunger and malnutrition, these agencies devoted much of their resources to wrestling with their own hunger for lasting solutions and their deficit of comprehensive information. When viewed from a distance, the agencies appear to have expended considerable energy on internalizing and rationalizing widely different, and sometimes delusional, views of nutrition. There were, for example, instances when policy makers and nutritionists seemed convinced that with adequate resources, they could wipe out hunger and malnutrition entirely. This view was juxtaposed with the possibility that they could accomplish nothing without government support and planning. In between these perspectives was an array of other views, each with some basis in science or practice, and each lacking the concrete evidence which might have marshalled monumental support.

By and large, the Heywards, Scrimshaws, Waterlows, and Autrets of nutrition science and policy were robust participants in most of the dates covered herein. Aside from the unusually consistent cast of scientists and policy makers intimately involved in this history, little else was static. Kwashiorkor, the favoured discussion topic of the 1950s, faded from view by the late-1960s. The enthusiasm for applied nutrition programmes in the late-1950s similarly tapered off in less than two decades. The feeding policies of the late-1940s by the late-1970s had been edged out by massive horizontal programmes which had little space for feeding programmes. The intricate and overwhelmingly complex nutrition planning schemes of the early-1970s were history before the decade ended. More impressively, the three initially nutritionally-

¹ Based on FAO data, the ACC/SCN estimated that from 1974-1976, 33% (976 million) of the population of the developing world suffered from hunger and malnutrition and that from 1988-1990, the figure was 20% (786 million). The ACC/SCN further estimated that the corresponding figures for children during these time periods were 42% (168 million) and 34% (184 million) respectively. Micronutrient malnutrition was not included in these estimates. *Second Report on the World Nutrition Situation*, I, Suffolk, England, The Lavenham Press Ltd. for the ACC/SCN, October 1992, p. 2.

interested agencies of the UN eventually came to have over a dozen partner agencies, all of whom registered similar concerns for nutrition. In spite of the catalogue of failures in nutrition policies, hunger and malnutrition, scarcely visible or understood in 1948, came to have considerable international standing by 1978.

Throughout this period, the common, and frequently controversial, ground on which policy was formulated was inhabited by policy makers and nutritionists. From Orr's nutritionally-minded call for a world food plan to Joy's and Payne's push for national food and nutrition planning, the nutritionists held a powerful role in policy formation. For three decades, the policy makers provided nutritionists with opportunities to present solutions to the nutrition problem. At the end of this period, however, there was widespread concern that the nutritionists alone could not and would not cure hunger and malnutrition. In much the way Payne felt that his food and nutrition planning "didn't go anywhere", and Orr had witnessed his plan follow a similar trajectory, the nutritionists built up a string of shortcomings destined to lower the confidence of the agencies in their abilities.² In Payne's view, the nutritionists, himself included, had a tendency "amongst the international agencies and amongst people who are involved in various aspects of technical assistance and relief assistance...to raise very great expectations and not fulfil them."³

On Magic Bullets

Throughout this history, the UN agencies addressed problems of hunger and malnutrition with scientifically-informed political solutions. The policies advocated always involved structural and programmatic changes and initiatives which would hypothetically result in tangible impact. With progress and expanded knowledge, however, the problem -- underdevelopment -- was found to be vastly more complex than previously envisaged. Orr's original approach, in the body of the World Food Plan, was ostensibly simplistic and widely underestimated the problems of hunger and malnutrition at hand. Yet Orr knew better than most about the important relationship between food, health, and income as he had been one of the first to elaborate it. In his mind, in order for development to proceed, people had to be well-nourished before they could possibly address the web of problems which kept them impoverished. Orr's

² P. R. Payne, interview, 5 June 1996.

³ Ibid.

ideology impressed and coloured decades of future policy.⁴ Within FAO, feeding industrial workers to boost production and concentrating more generally on augmenting total food production were policy aspirations that well reflected Orr's thinking. Unicef's wishes to ensure the health of children and, later, WHO's hope for health for all contained elements of Orr's raw idealism: if nutritional status could be secured, then all other aspects of development would begin to fall into place. After all, conjectured many administrators, poorly nourished children could not live up to their genetic potential, fulfil their true academic abilities, or solve their countries' problems.

Just as Orr had presented a food plan that was politically and mechanically impractical, the nutritionists provided insights that were beyond the reach of policy. Nevertheless, they persevered and presented solutions which they hoped would be adopted and implemented on grand scales. The policy makers, however, were impatient and fixated on rapid, tangible progress. Thus, when projects failed to produce notable success, it was desirable to label such endeavours as failures and to move on to another policy or project in the pipeline. Frequently, projects that seemed promising but never really produced substantive results were carried forward from decade to decade at low levels of funding. Certain applied nutrition projects and some supplementary feeding programmes conformed well to this course.

The appeal of nutritional idealism was, and remains, overwhelmingly attractive. As entangled as nutrition might be in a host of socio-economic and political issues, it somehow has always seemed simpler, perhaps due to the charms of science, to attack a health problem (or many) rather than its root causes. In this sense, the scientific optimism which emerged from W.W.II, it was hoped, would provide more effective tools for solving hunger and malnutrition than social and political progress alone. As time passed, this mode of thought became less acceptable. At Bellagio in 1964, Unicef noted that the solutions to hunger and malnutrition could not be implemented without the support of governments: nutrition had to be built into national development plans. During the following decade, FAO, WHO, and Unicef focused on methods for accomplishing this task. The facile political thinking, however, always involved what governments should be doing rather than how governments themselves would have to change. Nutrition, the nutritionists and administrators believed, needed only be a new government sector, connected to all other departments, in order for hunger and malnutrition to be commissioned to history. If only the right planners, ministers, and

⁴For some fascinating philosophizing on Orr's legacy as well as on nutrition's struggle for credibility, see: J. C. Waterlow, 'Sixth Boyd Orr Memorial Lecture: crisis for nutrition', *Proceedings of the Nutrition Society*, 1981, 40, pp. 195-207.

other political figures were informed on nutrition issues, the will and means to end hunger and malnutrition would follow.

Sixteen years after Alma-Ata, the same problem of overestimating nutrition's support and potential remained. Heyward then asserted that one of the great failures of UN nutrition interventions was that "In their cooperation with countries, agencies tend to neglect the political and cultural context and to emphasize only technical soundness."⁵ In an effort to achieve better nutrition through political change, Heyward thought that the UN system could "go further in analyzing the structure of power, and in advocating more democratization, decentralization, political accountability in the social sector, community empowerment and responsibility, equity, respect for human rights, and a better allocation of resources to social sectors."⁶ The perpetuation of emphasis on technical rather than practical data suggests that the design of the UN agencies themselves in some way has obstructed understanding real-world circumstances. The paradigm which reigned from 1948 to 1978 was that science could result in recommendations which, if properly implemented, would solve problems. By 1978, this model appeared to be shifting toward one which focused more on the management and implementation of solutions.

Since no single approach was ever so globally successful as to warrant enormous funding, mighty interest, and broad implementation, nutrition policy was always metamorphosing into something different. Major efforts such as nutrition education, weaning foods, high-protein mixtures, applied nutrition programmes, and national nutrition planning never proved themselves to be more than partial solutions for hunger and malnutrition. The scourge of malnutrition was simply not the vertically treatable problem a disease like smallpox was. A nutritional problem, such as xerophthalmia brought on by vitamin A deficiency, could conceivably be attacked vertically, and some argued then and later that such diseases should be the focus of nutrition policies.⁷ Leslie Burgess described the clash of vertical scientific solutions with less technical undertakings in the following terms:

⁵ E. J. R. Heyward, 'Martin J. Forman Memorial Lecture: The United Nations System and nutrition, the need for change in a more democratic world', Arlington, VA, sponsored by Helen Keller International, 15 June 1992, Heyward personal collection, p. ii.

⁶ Ibid.

⁷ During the late-1970s xerophthalmia was thought to affect more than 250,000 people annually while goitre affected roughly 100 million. Donald S. McLaren, 'Nutrition policy, planning, and programmes: a personal overview', in D. S. McLaren (ed), *Nutrition in the Community*, Chichester, John Wiley & Sons Ltd., 1983, 1-16, on p. 13. In 1992, the ACC/SCN estimated that in the 1980s goitre affected 5.6% (211 million) of the people in developing countries while xerophthalmia affected 2.8% (13.8 million). *Second Report on the World Nutrition Situation*, op. cit., note 1 above, p. 2. A startling report by WHO recently estimated that there are 1.6 billion goitre cases world-wide. Patrick

I think it was the feeding programmes which were a major problem, on the other side nutrition education was and to some extent is, viewed with suspicion by the conventional medical practitioner. You could persuade Mrs. X to eat less fat, or that she has to breastfeed her kids instead of [using] a bottle; it's all loose stuff. Whereas someone has produced a relatively new antibiotic which zaps a particular bug. So if you're in third world medicine, it's a lot more comfortable to go along with nicely defined things. If Mrs. X does not feed her kid well, and the kid dies, you feel responsible [but it is unclear what to do]. Whereas if you vaccinate the kid and the kid dies [of the disease] then you got it wrong, you've got to search out what was wrong with the vaccine.⁸

Thus, science appeared to provide more effective and rapid-acting solutions *and* dulled the emotional connection to the problem. It was therefore appealing for some nutritionists to immerse themselves in nutritional science rather than focus on the non-technical details of nutritional work. Ironically, it was the search for deeper technical understanding which painted an increasingly complex three-dimensional canvas of the anatomy of hunger and malnutrition. The more deeply hunger seemed entrenched in other issues, the greater the desire to find simple solutions became. It was only after decades of the resulting vertical approaches that administrators and nutritionists could swallow their pride and embrace a more holistic, horizontal vision for change.

Trends

The history of nutrition policy and its assorted peaks and valleys did not occur in an historical or institutional vacuum since related developments in other disciplines as well as in socio-political thought followed similar trends. In the development field during the 1970s, for example, Payne found that "there was the same disenchantment with the kinds of experts who were active in areas like poverty, just as nutritionists would be advocating various sorts of indicators for policy-making, so you had...around 1978 a proliferation of advice for assessing levels of poverty and a whole battery of ideas about how to shift assets and consumption."⁹ Just as Payne and Joy had promoted inter-ministerial nutrition planning, development experts were positing

E. Tyler, 'Lacking iodine in their diets, millions in China are retarded', *The New York Times*, 4 June 1996, pp. A1, A10, on p. A10.

⁸H. J. L. Burgess, interview, 29 May 1996.

⁹P. R. Payne, interview, 5 June 1996.

that inter-sectoral policies, if properly understood, would result in growth. In the history of developmental economics, similar trends can also be seen. After W.W.II, the central goal of socio-economic development was to bring the developing countries into modernity and transform them into carbon copies of the developed countries. By the same token, the UN system sought to provide Western-style medical care and relief to the developing countries during the 1950s. Over time, development economics alternatively embraced and repelled Western economic theories for development, much as nutritionism continuously changed its approaches.¹⁰

The search for vertical solutions to multi-sectoral problems was also a leitmotif of public health during this period. In fluid therapy research and practice, for example, investigators developed oral rehydration therapy, an extraordinarily simple and successful regimen for people suffering from dehydration, during the late-1960s. The international agencies readily adopted the therapy since it could have immediately visible effects. Nevertheless, the aetiological foundations of diarrhoeal dehydration -- lack of clean water and sanitation -- persisted.¹¹ By the same token, the agencies rapidly latched onto "solutions" to hunger and malnutrition, while overlooking the massive and unmanageable social, cultural, political, and economic factors at the root of the issue. These solutions arose because of the humanitarian and political pressures to produce them. By and large the nutritionists and policy makers were well aware of the intensely detailed backdrop that allowed for hunger and malnutrition to persist. In spite of the immensity of the problems, they wished to make progress and ideally, to save and improve people's lives.

On Experts and Policy Makers

This dissertation has chronicled, in part, the evolving position of experts in nutritional science and policy. Although the policies described generally targeted hunger and malnutrition, the prominent role of protein in nutrition politics during this period demanded considerable attention. The PAG provided one forum in which to view the changing composition of expertise in nutrition. Through the 1950s and into the early-1960s, the group consisted mainly of nutrition experts with extensive knowledge of protein. As nutrition concerns broadened in the UN system, the PAG

¹⁰ For an informative discussion of the evolution of developmental theory which focuses on the state of affairs in the 1980s, see: John Toye, *Dilemmas of Development*, Oxford and New York, Basil Blackwell Ltd., 1987.

¹¹ For a full elaboration of these concepts and the history of this treatment see: Joshua N. Ruxin, 'Magic bullet: the history of oral rehydration therapy', *Medical History*, 1994, 38, pp. 363-97.

guidelines and membership altered accordingly. By the 1970s, the PAG had grown from a group whose role was essentially technical to one that was much more programmatic and policy-oriented. Thus, economists, agriculturists, and planners among others were the experts making up the PAG. Their presence was a testament to the tilting of nutritional foci from vertical programmes to a holistic, horizontal approach. The FAO/WHO expert committees on nutrition made similar transitions, but like the PAG, maintained a few key nutritionists in notable positions for decades. Both groups saw an increase in nutritionally-minded experts from developing countries and from the United States where nutritional interest was rising markedly.

In the early years, before bureaucracies became bloated, the nutrition experts seemed to be closely aligned with nutrition policy at FAO, WHO, and Unicef. More than the documentation can possibly reflect, Scrimshaw, Jelliffe, Waterlow, Gopalan, and other nutrition experts had tight and often informal relations with policy makers that enabled them to guide the course of policy and research. At FAO and WHO, the interplay between the nutrition experts, the division heads and Directors-General eventually resulted in particular stances on nutrition issues.

A major device for arriving at a policy position, or at least for building scientific credibility, was the expert committee. Expert committee members were selected carefully, and although they occasionally arrived at misguided recommendations, their groups seemed to be the most amiable way to approach major nutrition issues. "Committees", wrote Scrimshaw, "have the defect that they often permit individuals to avoid responsibility for their decisions, but leaving major scientific policy decision to individuals would be intolerable."¹² According to Payne, the agencies always had a "hidden agenda" which indicated where they wished the expert committees to end up. Payne asserted that the frequently bland documents which emerged from such meetings resulted from the search for common ground:

It seems to me that the psychology of these situations [expert committee meetings] really deserves some research. For the first couple days, everyone behaves with great politeness. Then there's the intervening period where people go away with parts of draft report and inject their own ideas, and the end stage is of rising tension and usually ends up with people fighting over every word or paragraph of the report, and that cycle does repeat itself.¹³

¹² Nevin S. Scrimshaw, 'Shattuck lecture-strengths and weaknesses of the committee approach', *New England Journal of Medicine*, 15 January and 22 January 1976, 294, pp. 136-42 and 198-203, on p. 202.

¹³ P. R. Payne, interview, 5 June 1996

Thus, in spite of the appearance of agreement through so much nutrition documentation, there were certainly rip tides which tore across the general currents of thought. For the historian, it is unfortunate that the record does little to illuminate the undertones and turf battles of the expert committees.

At Unicef, a much different dynamic was at work since the agency did not have technical experts on staff and rarely co-sponsored expert committees. Heyward noted, for example, that Unicef was encouraged to forego its protein focus when it was "penetrated by those who stuck up for calories."¹⁴ As to Unicef's reply to the protein enthusiasts, however, he stated that Unicef did not criticize them so much "because a lot of them were friends."¹⁵ Thus, the routes by which many nutritional priorities were set and re-set did not necessarily come directly from the convening of expert committees or the publication of relevant studies. Rather, policies in certain cases resulted from informal discussions that occurred between the experts and the policy makers, off-the-record. Experts were not the integral part of nutrition policy formulation that they were at the specialized agencies.

As overwhelming as the notion might be, based on the oral and written record, I must conclude that the shape of Unicef's nutrition policies during the first three decades of its existence was largely the result of Heyward. From the start, his personal interest in nutrition drove Unicef's policies. Although he had had no professional training in the subject, every nutritionist familiar with Unicef, and most documents I uncovered, invariably fingered Heyward as the nutrition point-person at Unicef. One of his colleagues stated: "certainly Dick was the major force for broadening our whole approach toward nutrition. That has been a concern of his for many years. Even though he wasn't in a programme position, this was considered to be his bailiwick."¹⁶ Leslie Burgess, his colleague on the SCN noted:

Heyward, much more than Waterlow, Gopalan or anyone had been influencing nutrition. Although he had no professional training on nutrition, if you added it up, he probably had infinitely more influence on nutrition policy than anyone...It's the Heywards of the world who can accomplish something of nutrition, not the person with the Nobel Prize for nutrition, it's the committed generalists. It's blokes like him

¹⁴ E. J. R. Heyward, interview, 14 September 1995.

¹⁵ Ibid.

¹⁶ Julia Henderson, interview conducted by John Charnow, 30-31 July 1983, Unicef Archives, interview file, p. 29.

who have their finger on the pulse, and brother, did he have it on the whole UN system.¹⁷

It was largely through Heyward's work that Unicef's nutrition approach became decentralized, a trend eventually adopted throughout the UN system. When nutrition support flagged, Heyward inspired new commitments, and when new approaches were called for, Heyward positioned himself at the front lines. Heyward's position demonstrates that nutrition "expertise" did not have to come from professional training and being a nutrition expert was not a guarantee for influence.

In contrast to the formidable power over nutrition policy of Heyward, there was Teply, Unicef's senior nutritionist. Although Teply has frequently been mentioned throughout the dissertation, according to Heyward and others, his influence on policy was never prominent: "Teply never occupied an important policy position in Unicef though he was the senior nutritionist but that was not high on the totem pole, but he was very respected by the scientific community both here and elsewhere, and he had a detailed knowledge therefore he did provide a liaison between what they [the nutritionists] were talking about and what was important for Unicef."¹⁸ In spite of Teply's limited influence, his record did provide an important lens through which to present this history, particularly due to his penchant for history and defence of nutrition.¹⁹ In 1983, Teply suggested that "it is not accurate to make a blanket statement that in the past, nutritionists, as well as others, did not recognize the complexity of problems of malnutrition. A misreading of the history may tend to cause underestimation of the difficulties of dealing with the problems."²⁰ Teply time and again made this point to many administrators, Mahler of WHO among them. Reflecting both Teply's support of nutrition and Mahler's disdain for nutritionists, Teply wrote to Mahler:

I think I know what you meant to convey when you said in the 1950's nutritionists were thinking only of nutrient requirements and deficiencies. Unfortunately, there are many individuals prepared to

¹⁷ H. J. L. Burgess, interview, 29 May 1996.

¹⁸ E. J. R. Heyward, interview, 14 September 1995.

¹⁹ In 1973, Teply sent a memo around to Unicef's top administrators requesting that current nutrition priorities be considered "against a backdrop of experience over a number of years." Included in the memo was a copy of a Platt article written in 1954. This instance reflected not only Teply's nutritional history interest, but more importantly, the ongoing relevance of early nutritional insights. L. J. Teply, note for the record, 'Decreasing women's work load and improving living conditions in villages in developing countries', 27 June 1973, Unicef Archives, 88R025, Box T-006, Teply files.

²⁰ L. J. Teply, letter to Dr. Nyi Nyi, 29 March 1983, Unicef Archives, 88R025, Box T-006, Teply files.

believe that no nutritionists ever thought beyond this in the past and that approaching nutrition in a broader way is a completely new concept. Not only is this not true...but I believe that such impressions may well be counterproductive in the long run. [emphasis his]²¹

Teply's letter reflects both the respect nutrition maintained at Unicef and the different power dynamics at play at the specialized agencies. Neither FAO nor WHO ever had a nutrition figure as enduring and prominent as Heyward. As a result, nutrition's standing varied substantially with executive changes. There is an irony in this observation since Unicef, the agency without a focused nutrition department, spent a greater proportion of its budget on nutrition than the agencies which had designated nutrition units.²²

The termination of the PAG and formation of the SCN symbolized a lowering of the status of the nutrition expert, not of nutrition. According to Leslie Burgess, nutrition was actually boosted, especially with Heyward as chairman.²³ Since Heyward was closely tied to all the major UN agencies, his leadership of the SCN at least temporarily drew the importance of nutritional action upwards. This may in part account for the low-level of rumbling heard during the PAG's finale; nutrition was not over, and at least some of the nutritionists foresaw the opportunity to switch teams. At the time, however, the scientists were not brought up on high with the issues as they once were. Looking back on the roles played by scientists in nutrition, McLaren stated:

I don't think doctors or scientists have got key roles to play in the solution, they do have a key role to play in defining the problem and the magnitude....So the scientists had a role, but we overstretched ourselves earlier on, tried to do things that we didn't have the means or ability to do. So now it seems that organizers are not calling on the scientist.²⁴

McLaren's commentary fits the basic character and consideration of nutritional expertise in 1978 and is a view shared by many. For Béhar, a veteran of medicine and

²¹ L. J. Teply, letter to Mahler, 9 May 1979, Unicef Archives, 88R025, Box T-006, Teply files.

²² Waterlow undertook the complex task of estimating FAO and WHO nutrition expenditures for fiscal year 1978-1979. He figured that FAO spent 2.66% of its total budget on nutrition that year while WHO spent 1.02%. If, however, one included external funding sources for WHO nutrition work, the figure rose to 2.20%. Waterlow, op. cit., note 4 above, p. 200.

²³ H. J. L. Burgess, interview, 29 May 1996.

²⁴ D. S. McLaren, interview, 6 October 1995.

nutrition, it became apparent during his career that there really was no substantive role for the medical doctor trained in nutrition. He stated:

I am convinced now that what we nutritionists can contribute is limited to help those who are sick utilize technology for prevention, but ultimately the problem is not a medical problem, it is not a health problem, it is fundamentally a socio-economic problem. I don't think the best qualified nutritionist can do anything for people who are poor, ignorant; there is no advice that can be given to them, there is no miracle cure or preventive measure that can be provided to them, I mean people have to have enough to eat to eat well, and I think people will eat well if they have enough in general. If we raise the purchasing power of all people, I am sure the nutrition will be improved...but in general the major problems will be solved if we improve the economy. That I was not as clearly aware of then as I am now.²⁵

Waterlow, however, has taken a less severe perspective: "Nutrition occupies a middle place in the continuous chain of knowledge and endeavour which stretches from molecular biology to social and political science...Nutrition has something of its own to offer and in addition, its job is actively to pull together, to connect and to reduce the fragmentation of the biological and social sciences."²⁶ While FAO and WHO were divesting themselves of nutrition, Unicef was following Waterlow's thinking and beginning to build itself up with premier nutritionists. After all the debates over autonomy and nutrition sovereignty, in the 1980s Unicef decided that nutrition experts could be very useful, especially if they were kept in-house.²⁷

A broader look at other development fields and socio-political trends suggests that the fall of nutrition expertise's status reflected general attitudes of contempt for experts and ardour for managers. It was during the 1970s that a distrusting public in developed countries scrutinized professionalism. Doctors were especially vulnerable to this as their word was no longer the last word, but rather one of a number of opinions. The nutritionists described in this history had biomedical backgrounds and were pushed into defensive positions by this broader current of cynicism. Their long-standing position of low-prestige only exacerbated their vulnerable position. When they began, Béhar, Aykroyd, Waterlow, Gopalan, and their colleagues had had to

²⁵ Moisés Béhar, interview, 29 December 1995. When Béhar left WHO in frustration, he left nutrition behind entirely. After over three decades of nutritional involvement, he became a world-class expert in orchids.

²⁶ Waterlow, *op. cit.*, note 4 above, p. 205.

²⁷ E. J. R. Heyward, interview, 12 September 1995.

overcome widespread disdain for nutrition in order to pursue their work. Although these scientists through their breakthroughs, publications, and international exposure clearly elevated the role of nutrition and made it, for example, taught more extensively in medical schools, nutrition remained scorned. While the failures of nutrition ventures may have soiled nutrition's image, it seems more likely that nutrition's diffusion through so many disciplines left it with an amorphous, highly unsteady design. This combined with a management revolution earmarked nutrition and other public health fields, at least in the short-term, for a status considerably lower than its proponents desired.

Dr. Adeniyi-Jones, the Nigerian representative on Unicef's Board in the early-1960s and a long-time WHO officer, felt that the problem for nutrition and public health more generally rested with the approach taken by the doctors, consultants, and specialists. Those professionals, asserted Adeniyi-Jones, "don't have time for simple procedures and solutions. For a thing to be good, it must be complicated and consist of modern specialized technology...The specialists and experts have the ear of the decision-makers who take their word rather than yours and mine."²⁸ The problem Adeniyi-Jones perceived was that the medical doctors in the developing countries were in the most influential position in regards to acceptance of any public health doctrine:

When the ministers, politicians, and decision-makers are ill, they are in the hands of clinicians. They and their families depend on clinicians for their life-saving expertise. Little wonder that decision-makers are usually guided by the advice of clinicians. When we persist in saying, 'Prevention is better than cure,' we alienate the clinicians.²⁹

To him, all public health workers and experts had to bring clinicians more deeply into the fold of the public health worker. His remarks illuminate the profound divide, which was exceptionally wide in developing countries, between medical practitioners and public health personnel. Thus, the alienation from the medical community spoken of by nutritionists was but one example of a broader backlash against public health. Adeniyi-Jones believed that

We [public health workers] do not give them [clinicians] an opportunity to be exposed to see that they can benefit from a community-based and prevention-oriented approach. Subconsciously or even consciously, the implication is that if you succeed in preventing illness, you will do

²⁸ Olatunji Adeniyi-Jones, 23 January 1984, Unicef Archives, interview file, p. 14.

²⁹ Ibid.

clinicians out of their jobs. It is futile for public health workers to think that they can build an empire to rival the clinical empire. What we have to do in developing countries is to develop an approach which will combine the two completely.³⁰

These words provide greater insight into the tumble nutrition took during the 1970s. Not only was nutrition viewed by policy makers as one of many tools available for health improvement, but, like other public health fields it posed an apparent threat to health professionals in developing countries. Nutrition's rises and falls did not form a unique path in the international health community since many other broadly-based fields -- education and family planning for example -- suffered from similar high expectations and dashed hopes.

The Pace

In historical perspective, the changes that occurred in nutritional science and the concordant alterations to policy occurred at breakneck speed. Scrimshaw, Gordon, and Taylor's review of nutrition and infection in 1959 informed the backdrop of the Alma-Ata declaration less than twenty years later. By the same token, Brock's and Autret's "rediscovery" of kwashiorkor in the early-1950s was rapidly translated into action with the subsequent formation of the PAG and concurrent explosion in protein interest and research. The rapidity with which scientific findings and thought became policy suggests that the proximity of scientists to the policy makers played a striking role in policy priorities.³¹ For the heads of WHO, FAO, and Unicef, these tight relations were often of great usefulness. When early supplementary feeding policy was directed at school-aged students, it was the considerable influence of nutritionists that properly re-aimed projects at pre-school children. On the other hand, this same influence from the late-1950s to the early-1970s successfully kept the UN system's attention principally on protein deficits when more holistic thinking was illuminating a constellation of other issues.

Ironically, in spite of the low esteem held for nutrition by the medical establishment of the 1940s and 1950s, nutrition nevertheless became medicalized and

³⁰ Ibid., p. 15.

³¹ Quinn perhaps for effect stated that the fancies of the donor community changed at supersonic speed: "one year the answer is protein, the next energy, and the next micronutrients." Victoria J. Quinn, *Nutrition and National Development: An evaluation of nutrition planning in Malawi from 1936 to 1990*, Den Haag, CIP-Data Koninklijke Bibliotheek, 1994, p. 25. Such hyperbole does not accurately reflect the actual rate at which these developments occurred.

medically dominated. From the 1940s to the early-1970s, the strings of knowledge on nutrition were tightly held by a cadre of a few nutritionists, many of whom were medical doctors with nutritional expertise.³² The prominence of these clinicians explains in part how nutritional disease, rather than socio-economic status, dominated early nutrition research in developing countries. In the 1970s, these nutritionists began to lose their grip as policy makers better understood nutritional issues and were more comfortable instituting policies without extensive and overwhelming support from nutrition experts. Certainly experts were still consulted, but they were not relied on every step of the way as they had been in the 1960s.

Although many nutritionists were perhaps more interested in clinical aspects of disease than public health initiatives, it seems that exposure to nutrition problems inspired a melding of public health to nutritionists. Waterlow, for example, left his intensely scientific work in Jamaica for the halls of public health in London. In Central America Scrimshaw rapidly looked for public health applications of nutrition knowledge. Accelerating this trend was the growth of respect for native researchers and field staff. Native researchers gained influence as Western methods were imbued and research responsibilities passed along. Waterlow in Jamaica and Scrimshaw in Guatemala, for example, both assigned increasing amounts of their work to local researchers. In so doing, research often came to have more practical components, as we have seen in Mata's study of Santa María Cauqué. As this process occurred, field staff for WHO, FAO, and especially Unicef were provided with greater opportunities to offer administrators their input and to independently design projects in the field.

Future Study

The history of nutrition policies within the UN, and more generally in development work, has meagrely been touched by historians. Considering the quality of primary sources, it is a field that deserves development in the future. This dissertation has only covered a small zone of nutritional work in international perspective and points toward numerous areas for further investigation. Particularly deserving of a focused study are the relations between nutrition and agricultural and food industries which became increasingly pronounced in the 1960s and 1970s. A good deal of collaboration, for example, went on between American business and the PAG during its later years. The PAG firmly believed that business could have a major

³² Paul Lunven of FAO observed: "All these people [nutritionists] were medical doctors, human nutrition as such was strictly medical." Paul Lunven, interview, 27 March 1996.

impact on protein malnutrition in developing countries, and therefore co-operated extensively. This is a theme that has been handled in Carpenter's protein work and deserves further development.

In order to maintain focus on hunger and general malnutrition, I have specifically avoided two nutritional topics which deserve considerably more attention than I could give them here: vitamin A and iodine. Of all the micro-nutrient deficiencies, these were the two which affected the most people and were the most easily treated. Vitamin A's incorporation into health and nutrition programmes followed a twisting path into the late-1970s wrought with personality conflicts and ideological rifts. Iodine followed a less tempestuous route but would also be an accessible and rich mine for medical historians.

One of the few areas of this dissertation which has been extensively addressed by historians and which I have therefore de-emphasized is breastfeeding. Many nutritionists took an early interest in breastfeeding issues and foresaw catastrophe. It was in the 1950s that kwashiorkor focused concern on the weaning child, a cause célèbre for the development community that resulted in the PAG. The development community's relentless calls for low-cost high-protein weaning foods, which ironically coincided with the emergence of breastmilk substitutes, has not been considered fully in an academic piece. The general developments in breastfeeding research from Cicely Williams up through the Jelliffes would seem a constructive area for an expansion of other work on the subject.

The rise of primary health care in development is still another area worthy of more historical research, especially insofar as it has come to influence much of today's international health policies. WHO was the central player in pressing for it through the 1970s until Unicef and other agencies began integrating it into their policies. The roots of primary health care, like nutrition, border on a number of fields and would be worth unearthing in the investigations conducted by WHO staff and WHO-supported research institutions.

Perhaps the richest area for exploration which stems from this work is the relationship between headquarters and the field. While I have elaborated on the shifts in policy, the manner in which such policy trickled down to the field level, if at all, would be immensely revealing and interesting. This dissertation does not draw links between the barefoot community health workers and headquarters, nor between project recipients and the office. From the few contacts which I had with field workers and their correspondence, I found that there was a range of responses to the regal nutritional pronouncements of headquarters in Geneva, Rome, and New York.

For UN personnel, the declarations and definitions contained in policies on applied nutrition programmes, basic services, and primary health care, appeared largely irrelevant to their work or utterly simplistic. In this vein, major conferences such as the World Food Conference of 1974, Bellagio in 1964, or Alma-Ata in 1978 were created simply to energize political will, not to alter ongoing field activities. The field workers had more specialized ways of dealing with nutrition programmes on a local level than any global declaration could address adequately. The few nutrition workers with whom I spoke and who were unaffiliated with the UN, rarely encountered WHO, FAO, and Unicef personnel and found the idea of a nutrition policy originating from outside the country preposterous. For Felicity Savage for example, a paediatrician working between 1966 and 1972 in Zambia, "the end of the road for information", the machinations of the UN system were so far removed as to be completely irrelevant.³³ She felt that the documentation which did reach her from Geneva, Rome, and New York was "indigestible and impractical".³⁴ Although she would occasionally encounter the debates in the literature which found its way to her in Zambia, the only international influence she recalls was the impact of research on nutrition and infection. Her commentary highlights how in spite of appearing larger than life in the press and international community, these UN nutrition programmes reached a fraction of the needy people the policies targeted.

My peripheral description and interpretation of the process of policy implementation suggested that the ideological distance between field and headquarters paradoxically increased and decreased during this time period. Through top-down decentralization, agency policy was responsible for policies and programmes in the field which more closely corresponded to the needs of communities. On the other hand, the political negotiations at the agencies seemed to grow increasingly distant from the recipients' needs as political expediency took priority. A major case-study of relations between headquarters' policies and field staff's actions would present one of the other important facets of this nutrition history. A further field of interest along this track would be an elaboration of the relations between nutritional experts located at institutes in the field and field workers. Such an investigation would certainly clarify the more elusive relations between nutritional science and practice and between policy and practice.

³³ Felicity Savage, interview, 4 April 1996. Between 1966 and 1968, Savage was working for the Government of Zambia as a medical officer. She wrote *Nutrition for Developing Countries*, a popular nutrition field manual.

³⁴ Ibid.

Notes on the Dissertation

In order to maintain focus on FAO, WHO, and Unicef, I have limited discussion of related agencies that also played an increasing role in nutrition. I have done so for two reasons, the first is for the sake of continuity: these three agencies began working on nutritional issues decades before other agencies and therefore have a coherent history. Secondly, the other agencies, such as The World Food Programme (WFP) and the World Bank, either began their nutritional activities late in this history or, as was the case of WFP and the International Fund for Agricultural Development (IFAD), were involved more in agricultural and socio-economic development than nutrition.³⁵

Emphasis on the agencies was placed in descending order on Unicef, FAO, and WHO. Of all the agencies, Unicef was the most active in the field and the most policy-oriented. FAO and WHO were technical agencies, initially less concerned with policies than with providing technical experts to tackle problems. Whereas FAO and WHO were created with scopes of work that were much broader than nutrition -- food, agriculture, and health -- Unicef from its inception was focused on the nutritional needs of children. As understanding grew and projects advanced, nutrition continued to be of prime importance for Unicef, even if its funding levels were never exactly in line with the desires of the Board to make nutrition the priority. FAO began with extremely strong nutritional roots. The great works of Orr and his subsequent leadership of FAO provided a major impetus for nutrition exploration during the first years of the agency. However, especially after the departure of Autret as director of the Nutrition Division, there was a clear descension in the priority nutrition had in the agency. Nevertheless, the sheer size of the division in relation to its sister unit at WHO enabled it to command greater attention, especially thanks to massive undertakings like Sen's FFHC. WHO was another story altogether. Of the agencies, it was always, of course, the most medically-oriented and therefore was the first to show a substantial interest in the relationship between malnutrition and infection. The size of the unit, however, in itself was a reflection of the low profile accorded nutrition. The core staff really never exceeded a dozen persons, and was usually closer to half that number.

Given the small commitment on WHO's part to nutrition, it would have been historically inaccurate to imply through textual attention that its nutritional influence

³⁵ For a dogmatic summary of WFP's scope of work see: *World Food Programme: A story of multilateral aid*, Rome, FAO and UN, 2nd edition, 1971.

was great. As the history shows, however, WHO ironically came to have much more to do with nutrition, especially under the umbrella of primary health care, than even FAO. Furthermore, though outside the scope of this history, Béhar at WHO made breastfeeding concerns the highlight of his work there, and fought courageously for world-wide standards on breastmilk substitute production.³⁶ At WHO, there was also an atmosphere of dislike for nutrition. Mahler notoriously thought little of nutritionists and this made the work increasingly difficult at WHO. As FAO pushed increasingly for national policies, and nutrition leadership weakened, nutrition sank there too. It was only at Unicef that Heyward and his colleagues were able to usher nutrition forward and shepherd new nutrition policies.

Serious focus was put on the PAG throughout the dissertation because, although it was initiated as a technical advisory group, it rapidly adopted a wider policy-oriented mandate. I found that by elaborating on the PAG history, it was indeed a reflection of the trends shaping nutrition policy. Moreover, for a time, it was one of the most influential bodies in the UN system, capable, for example, of dominating the spotlight during the "protein crisis". This is the first document to extensively trace the tensions which were largely responsible for the PAG's demise in 1977.

Although the Alma-Ata primary health care conference for the most part grew out of a body of research and policy distinct from nutrition, it well reflected the broadened thinking in public health and nutrition. The malarial and smallpox campaigns, sanitation and clean water programmes, and basic medical services formed the central foundations of the Alma-Ata Declaration. The conference had major ramifications not only for the implementation of health strategies during the coming decades, but also for the implementation of nutrition interventions. As had been the case decades before, nutrition became re-medicalized as nutritionists, medical doctors, and policy makers sought simple nutritional measures that could solve specific nutrition problems. Thus goitre and xerophthalmia garnered serious attention and continue to do so. They are examples of how small nutritional interventions can have major impact and draw the attention horizontal nutrition interventions are likely to miss.

To the extent that it was possible, I have avoided use of documents after the Alma-Ata conference, since this seemed the logical point to end this history and

³⁶ For a summary of some of the breastfeeding efforts WHO piloted, see: Gabrielle Palmer, *The Politics of Breastfeeding*, London, Sydney, and Wellington, Pandora Press, 2nd edition, 1993, pp. 249-72.

already infringes on contemporary events. This should not denote that the Alma-Ata conference and nutrition's apparent incorporation into primary health care was the endpoint in the evolution of nutrition policy during the century. On the contrary, there was a plethora of changes in nutritional understanding after Alma-Ata's Declaration -- in the fields of immunology and micronutrients among others -- and there is plenty of room for at least one more dissertation tracing the period from 1978 to the present day. This dissertation is a slice of history, and I have made every effort to avoid passing judgment on any nutritional enterprise mentioned -- whether it was the protein crisis or ANPs. These are still issues hotly contended, and I do not believe that we yet have the historical distance and scientific evidence to judge them. In the case of the protein crisis, I spent considerable time on the criticism levied against the protein proponents not in order to influence opinion of "the protein fiasco", but rather because in historical context, it was a great debate which influenced policy. Nutrition is a discipline loaded with uncertainty; Teply wrote that when one Tufts University nutritionist was asked,

'Why is teaching of nutrition especially difficult?' He replies, 'If I were teaching mathematics there wouldn't be numerous outsiders telling my students that 2 plus 2 equals 3, or 7.' By the same token, over the past 20 to 30 years, there have been numerous disparate voices with regard to improvement of nutrition...Some issues have been resolved and consensus has been reached in some areas but the field still remains quite complex.³⁷

The same certainly holds true today and makes evaluation of the events covered herein a daunting task.

If there was one fairly consistent finding in my oral histories and meetings with personnel, it was that, like the swinging of the pendulum from protein to calories, opinion about various policies and findings changed over time. Waterlow is perhaps the best example of this, having been a fierce protein advocate, then a calorie enthusiast, and then, today, more interested in the protein gap than he has been in two decades. His story was played out in the lives of many administrators and scientists and highlighted how difficult a time science can have when attempting to define problems on a global scale.

³⁷ Les Teply, letter to Dr. Nyi Nyi, 14 December 1984, Unicef Archives, 88R025, Box T-006, Teply files.

The Problem with Nutrition

A superficial examination of nutrition during the period covered in this dissertation could submit that nutrition did in fact become less important to UN policy by the late-1970s. A cursory reading of the Alma-Ata Declaration appears to support this perspective since nutrition received little written attention. Yet nutrition was important, and it was a UN system mantra to harp on its importance at every opportunity. This was because the lessons learned during the 1940s, 1950s, 1960s, and 1970s illuminated the interconnectedness of nutrition to everything. Thus, it became impossible to avoid mentioning the importance of nutrition in health, just as one would not speak of healthy government without the notion of democracy.

As the intricacies of nutrition were revealed, however, nutrition came to denote hunger and malnutrition more than some universal nutrition standard defined by clinically-proven levels of caloric and protein intake. The horizontal programmes of Alma-Ata, which certainly had considerable input from nutrition proponents, were designed with attention given to the ways in which these tactics could avert hunger and malnutrition, rather than to help reach the ever-elusive good nutritional status idealistically envisaged. When the policy makers proclaimed time and again that nutrition was important, they were making the blandest comment on the global situation which they could muster. The premise of Unicef's calls to incorporate children's nutrition into national development planning and of the Alma-Ata Declaration were, at the time, unassailable. The thought, at least during the initial decades of international nutrition policy-making, was that nutrition needed all the attention it could attract, thus, it would not be politically savvy to dwell on the implementation of these plans. Courageous sounding declarations -- even in the board room or at an assembly of representatives -- presented a simpler route than examining the data, making recommendations, evaluating, correcting, and following-through. The minutiae of implementation was left to the field workers, just as the nutritionists had left the implications of their recommendations to the policy makers. For the nutritionists, and often the policy makers as well, however, nothing would ever be accomplished without major financial and political support from the countries themselves. Gopalan asserted: "you can do a lot of things when you have the money and monetary resources...but even so I think that there is nothing that is black or white, the real deficiencies with respect to these systems are the developing countries themselves, if you are weak the powerful people take advantage; the developing

countries, have not done enough to put their house in order".³⁸ Thus, it is not surprising that the nutritionists rarely saw themselves as responsible for the outcome of their recommendations since they believed that it was up to the agencies and governments to execute the implementation of their ideas. The nutritionists inhabited a realm which was largely their own and which was blanketed and buffered by layers of science and formulae which would ensure the sanctity of nutrition as well as their own embarrassment for the field. Waterlow well described the difficult balance nutritionists faced between producing credible research and actually having a public health impact: "I know of people who are making important contributions to nutrition, who regard with distaste the idea of having the label 'nutritionist' attached to them, as I did myself until some years ago."³⁹ For Waterlow, part of the pressure in being a nutritionist arose from the

view that real progress in eliminating malnutrition can only come through social, economic and political change; that the kind of practical nutritional programmes which have been attempted are just patching up cracks; and the at the most useful contribution of the nutritionist is to define more clearly the characteristics of communities at risk and to provide the planners with a choice of options. Thus the pressure on one side to operate as a biochemist or physiologist is balanced by pressure on the other to operate as a sociologist, demographer or political scientist.⁴⁰

The awkward position of the nutritionist heavily influenced the focus and presentation of his work between 1948 and 1978. His position, however, has evolved considerably and cannot always be interpreted by the work in which he was engaged. Notably, the focus of research should not necessarily be interpreted as the primary interest of the investigator involved. Although Béhar was focused for some time on kwashiorkor in Guatemala, we have seen that his interests were much broader. By the same token, though in the eyes of some nutrition enthusiasts, Scrimshaw is synonymous with protein, his genuine interests were always more holistic than the controversies in which he was embroiled might imply.

³⁸ C. Gopalan, interview, 31 March 1996.

³⁹ Waterlow, *op. cit.*, note 4 above, p. 198.

⁴⁰ *Ibid.*, pp. 198-99.

A Recipe for the Future?

FAO and Unicef began with the intention of prioritizing nutrition. WHO, from the start, acknowledged the important role of nutrition in its broader mission. Yet not one organization ever made "nutrition" a financial or programmatic priority -- other fields always interceded and dominated. Perhaps this followed the realization that there was no such thing as working solely on nutrition; to work on nutrition meant to work on all aspects of health, and the agencies therefore diversified. In leaving the focus of policy and scientific discussion in the dissertation to those areas which directly impinged on hunger and malnutrition, I acknowledge having run the risk of overlooking plenty of policies that were indirectly related. As Greaves has noted: "Most programmes that have a major impact on the nutritional status of populations would not be recognized by many as 'nutrition programmes' at all."⁴¹ A full examination of FAO, WHO, and Unicef financial and ideological priorities would suggest, however, that before the 1970s, other fields dominated which were not thought to be inherently tied to nutrition. Malarial and yaws campaigns, reforestation, and agricultural industrialization simply were not couched in terms of their relations to nutrition.

After 1978, nutrition policy and its interactions with nutritionists set out on a new course which would surely have the ups and downs in nutritional interests which characterized the previous decades. The largely uneven path nutrition followed from the formation of FAO, WHO, and Unicef to the Alma-Ata Conference is representative of the path taken in many strains of developmental approaches during the same period. With nutrition's vast area, probing the depths of developments in history reveals ever greater complexities, confusion, and contradiction. Nutrition became at once inseparable from any other programme, and yet needing a degree of separability in order to establish its own footing and hold its ground. The policy makers created an environment which applauded "easy" answers to nutrition problems. They begged the nutritionists and experts to direct them toward the focal points, and the nutritionists attempted to oblige. The results were as eye-opening for the nutritionists as they were for the policy makers. The absence of hunger and malnutrition seemed at best to be an indicator of development rather than the result of any particular programme. The agencies' administrators realized that their efforts alone could have no impact on hunger and malnutrition unless they were undertaken

⁴¹ J. P. Greaves, 'Nutrition delivery system', *The Indian Journal of Nutrition and Dietetics*, 1979, 16, 75-82, on p. 75.

with the tangible support of politicians. At the end of 1978, with some of the best techniques defined for improving health and nutrition, the agencies would have to wait and see if the countries themselves could be enticed to commit the necessary resources. Based on past experience, future efforts appeared to require a combination of patience and prodding, often the mainstay of public health endeavours.

Administrative Heads, 1948-1978

Unicef Executive Director

Maurice Pate	1947-1965
Henry Labouisse	1965-

Head of WHO Nutrition Section/Unit

Frank Clements	1948-1953
R. C. Burgess	1953-1961
V. N. Patwardhan	1961-1963
José María Bengoa	1964-1974
Moisés Béhar	1975-

Director of FAO Nutrition Division

W. R. Aykroyd	1946-1960
M. Autret	1960-1971

Director of FAO Food Policy and Nutrition Division

Marcel Ganzin	1971-1977
G. O. Kermode (acting Director)	1977-

PAG Chairman

William Darby	1956-1959
P. György	1960-1964
W. H. Sebrell	1965-1967
H. Parpia	1968-1969
N. S. Scrimshaw	1970-1973
J. Cravioto	1974-1975
Sol Chafkin	1975-1977

FAO Director-General

John Boyd Orr	1945-1948
Norris E. Dodd	1948-1953
Philip V. Cardon	1954-1957
B. R. Sen	1958-1967
A. H. Boerma	1968-1975
Edouard Saouma	1976-

WHO Director-General

Brock Chisholm, Executive Secretary of the Interim Commission	1946-1948
Brock Chisholm	1948-1953
M. G. Candau	1953-1973
Halfdan Mahler	1973-

Secretary-General of the United Nations

Trygve Lie	1946-1953
Dag Hammarskjöld	1953-1961
U. Thant	1961-1972
Kurt Waldheim	1972-

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